



ben

BIOSCIEdNET

DIGITAL LIBRARY PORTAL FOR TEACHING AND LEARNING IN THE BIOLOGICAL SCIENCES

Become a LEADER in
Developmental Biology
Education! **Tutorial:** Submitting
learning/teaching objects for the
SDB digital library

Diana Darnell: SDB/LEADER Archivist
darnell@email.arizona.edu

What is LEADER?

Library of Educational Annotated Developmental biology Resources
A searchable, peer-reviewed, collection of digital Learning Objects
available through:



SOCIETY FOR DEVELOPMENTAL BIOLOGY



www.apsarchive.org The APS Archive of Teaching Resources

SOCIETY FOR DEVELOPMENTAL BIOLOGY **A Collaborative Digital Library**

[Search the Archive](#) [My Archive](#) [Submit a Teaching Resource](#) [Help/FAQ](#) [More Information](#) [Resources by Level](#)

www.sdbonline.org

Why Have LEADER?

Why not just use Google?

- Have you ever had to teach (or learn) something you didn't already know well and wished a colleague could recommend an appropriate Learning Object?
- Peer reviewed Learning Objects give you and your students confidence & teach responsible web research skills
- Links to related Learning Objects and papers can create networks of useful material.
- Metadata can help you refine your search productively!

Learning is the object, but what is a Learning Object?

- A Learning Object is any item you could use in teaching or learning, such as:

An active learning exercise, animation, assessment tool, audio file, course syllabus, curriculum, dataset, diagram, digital presentation (PowerPoint), exam, field trip guide, figure, glossary, graph, homework assignment, illustration, image, laboratory exercise, lecture or lecture outline, movie, non-lab exercise, origami exercise, photograph, podcast, Q&A set for clickers, review, simulation, teaching strategy, textbook, video file, web page, X-ray...

Why should YOU submit a Learning Object?

- Think about something you have developed to improve learning for your (DB) students.
- Think about the amount of time you put into making it useful and clear.
- Think how great it would be to extend the benefit of that effort beyond your students!
- Think how much better you might make your LO while you are tweaking it for submission!

How can you submit your Learning Object?

- Go to the APS web page:

<http://www.apsarchive.org>

and log in
here



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Login REGISTER NOW!

E-mail Address
Password

Remember Me

Login/Register

You must log in in order to submit a teaching

Featured

See the TOP 100
K-12 | Undergrad | Grad./Prof. | Cont. Ed. | Recent

Forces and Motion in the Human Body

Students explore the physics of movement, assessment of gait and ways in which they can preserve mobility throughout their lifespan.

News

Brian R. Duling, Ph.D. (University of Virginia Health Sciences Center) has been named the 2009 Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Awardee. [Learn More »](#)

15 Finalists were selected for the 2009 David S. Bruce Excellence in Undergraduate Research Award. Finalists are interviewed at Experimental Biology to determine Bruce Awardees. [Learn More »](#)

This Month in History

April 1, 1952: The Big Bang Theory was proposed by Alpher, Bethe & Gamow in Physical Review. [Learn More »](#)

April 1, 1578: William Harvey, of England, discovered the concept of blood circulation. [Learn More »](#)

April 2, 1931: Jacques Francis Albert Pierre Miller . born on April 2, 1931. was a French-

Welcome

Welcome to the APS Archive of Teaching Resources, a collection of digital resources for science educators at all levels. Each resource has been reviewed for scientific accuracy and the use of humans/animals in teaching.

The Archive is a collaborative library with many professional societies contributing resources. With one search, you can find resources in physiology, anatomy, developmental biology and other fields.

The Archive also is a colleague-to-colleague sharing community. We encourage you to share resources you have developed, recommend resources for review, and participate in user groups.

ben BIOINTELLIGENCE

NSDL THE NATIONAL SCIENCE DIGITAL LIBRARY

NSF

The APS Archive of Teaching Resources recognizes our sponsors and collaborators: The National Science Foundation, The National Science Digital Library, and BEN BiosciEdNet. [Read More »](#)

The American Physiological Society | The Human Anatomy & Physiology Society | National Association of Health & Science Education Partnerships | Society for Developmental Biology

To Submit a Resource

Click here

The screenshot shows the homepage of the APS Archive of Teaching Resources. At the top, the URL www.apsarchive.org is displayed in a blue banner. Below the banner is a navigation menu with several links: "Search the Archive", "My Archive", "Submit a Teaching Resource", "Help/FAQ", "More Information", and "Resources by Level". An arrow points from the text "Click here" to the "Submit a Teaching Resource" link. The main content area is divided into several sections: "My Archive" (with a welcome message to Diana Darnell), "Featured" (highlighting "See the TOP 100" resources), "News" (reporting on Brian R. Duling's award), "This Month in History" (listing historical events from April), and "ResearchBYTES" (listing various research topics). The footer contains logos for the American Physiological Society, The Human Anatomy & Physiology Society, National Association of Health & Science Education Partnerships, and Society for Developmental Biology.

To Link through SDB


The screenshot shows the website www.apsarchive.org with the tagline "The APS Archive of Teaching Resources" and "A Collaborative Digital Library". The navigation bar includes "Search the Archive", "My Archive", "Submit a Teaching Resource", "Help/FAQ", "More Information", and "Resources by Level".

A welcome message for Diana Darnell is displayed in a yellow box. The main content area is titled "Submit a Teaching Resource" and explains the submission process. Below this, four partner organizations are listed with their logos:

-  [The American Physiological Society](#)
-  [Human Anatomy and Physiology Society](#)
-  [National Association of Health & Science Education Partnerships](#)
-  [Society for Developmental Biology](#)

An arrow labeled "Click here" points to the SDB logo. The footer contains navigation links and logos for all four partner societies.

www.apsarchive.org The APS Archive of Teaching Resources

 SOCIETY FOR DEVELOPMENTAL BIOLOGY www.sdbonline.org **A Collaborative Digital Library**

[Search the Archive](#) [My Archive](#) [Submit a Teaching Resource](#) [Help/FAQ](#) [More Information](#) [Resources by Level](#)

Welcome Diana Darnell. You can access your saved searches and resources through the [My Archive](#) link above.


Submit a Teaching Resource - Step 1


Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
-----------------------	-----------------------	--------------------	--------------------	------------------------	-----------------------	---------------------	----------------------	--------------------	-------------------


Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

After submitting this page, this resource will be saved.
To edit this submission: Until you complete the submission process, you may access it via [My Submissions](#) in My Archive to make edits. Once completed, it will be submitted for review. At that point, you will not be able to make further edits.
**Required Fields*

Enter the title of this teaching resource?*

Enter the development date of this resource.*  (m/d/yyyy)

Enter a description of this resource.* 

How might this resource be used?* 

Add your title
And the date

A short description

A helpful suggestion

Scroll down

For each page, fill in the blanks with text or selections
From a given list. These are text boxes.

METADATA creation

Will the user be charged to download, view, or use this teaching resource?*

No Yes - If so, please describe the cost:

Are there any additional restrictions to the usage of this teaching resource?*

No Yes - If so, please describe the restriction:

Check all appropriate grade level(s) that apply for this resource.*

- Preschool
- Primary Elementary (Grades K-2)
- Intermediate elementary (Grades 3-5)
- Middle School (Grades 6-8)
- High School lower division (Grades 9-10)
- High School upper division (Grades 11-12)
- Undergraduate lower division (Grades 13-14)
- Undergraduate upper Division (Grades 15-16)
- Graduate
- Professional (degree program)
- General Public
- Informal Education
- Continuing Education

Save and Complete Step 1

[Home](#) | [Search the Archive](#) | [My Archive](#) | [Submit a Teaching Resource](#) | [Help/FAQ](#) | [More Information](#) | [Resources by Level](#)

Physiological Society



The Human Anatomy
& Physiology Society



National Association of
Health & Science Education Partnerships



Society for
Developmental Biology

Is there a cost?

Any restrictions?

What ages is this
Best suited for?

Click Save and
Complete Step 1

METADATA creation

www.apsarchive.org The APS Archive of Teaching Resources

SOCIETY FOR DEVELOPMENTAL BIOLOGY A Collaborative Digital Library www.sdbonline.org

Search the Archive My Archive Submit a Teaching Resource Help/FAQ More Information Resources by Level

Welcome Diana Darnell. You can access your saved searches and resources through the [My Archive](#) link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 2

Step 1 Main Step 2 **Disciplines** Step 3 Keywords Step 4 Language Step 5 Contributors Step 6 Educational Step 7 Standards Step 8 Collection Step 9 Resource Step 10 Review

Do not use the forward and back buttons in your browser during this process. Move forward using the "Save" buttons. Blue bar links will not save any changes made, but you can move to any step for saving.

Your Teaching Resource

Please select all discipline(s) that fit your teaching resource. Click the + plus icon to see all other disciplines.

Primary Disciplines per Partner			
<input type="checkbox"/> Anatomy	<input type="checkbox"/> Bioethics	<input type="checkbox"/> Bioinformatics	<input type="checkbox"/> Botany & plant science
<input type="checkbox"/> Cell biology	<input checked="" type="checkbox"/> Developmental biology	<input type="checkbox"/> Education	<input type="checkbox"/> Embryology
<input type="checkbox"/> Evolutionary biology	<input type="checkbox"/> Genetics & heredity	<input type="checkbox"/> Histology	<input type="checkbox"/> Human biology
<input type="checkbox"/> Invertebrate biology	<input type="checkbox"/> Molecular biology	<input type="checkbox"/> Reproductive biology	<input type="checkbox"/> Vertebrate biology

+ All Additional Disciplines

Save and Complete Step 2

Home | Search the Archive | My Archive | Submit a Teaching Resource | Help/FAQ | More Information | Resources by Level

The American Physiological Society The Human Anatomy & Physiology Society NARSEP National Association of Health & Science Education Partnerships Society for Developmental Biology

Highlight all disciplines that could benefit from your LO.

These become search terms and limit key word lists.

Save and Complete Step 2

Welcome Diana Darnell. You can access your saved searches and resources through the **My Archive** link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 3

Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
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Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Please select all keyword(s) that fit your teaching resource. The first set are primary suggestions from the partner and discipline(s) selected for this resource. Click on the **+** plus icon at the bottom of the page to see all other keywords.

Clear All Selections

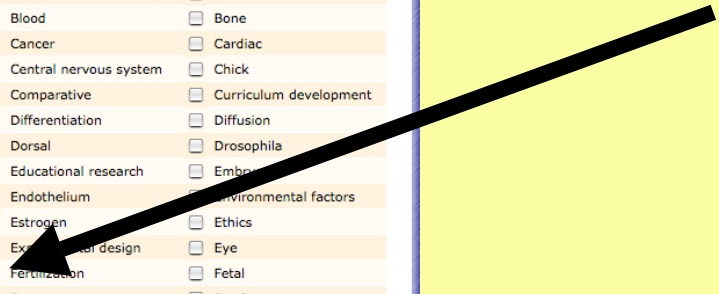
Primary Keywords per Partner & Discipline(s)			
<input type="checkbox"/> Abnormal	<input type="checkbox"/> Active learning	<input type="checkbox"/> Adult	<input type="checkbox"/> Aging
<input type="checkbox"/> Alcohol	<input type="checkbox"/> Amphibian	<input type="checkbox"/> Angiogenesis	<input type="checkbox"/> Animal
<input type="checkbox"/> Antagonist	<input type="checkbox"/> Apoptosis	<input type="checkbox"/> Assessment of learning	<input type="checkbox"/> Axis
<input type="checkbox"/> Birth	<input type="checkbox"/> Blastomere	<input type="checkbox"/> Blood	<input type="checkbox"/> Bone
<input type="checkbox"/> C. elegans	<input type="checkbox"/> Calcium	<input type="checkbox"/> Cancer	<input type="checkbox"/> Cardiac
<input type="checkbox"/> Cardiovascular	<input type="checkbox"/> Cell signaling	<input type="checkbox"/> Central nervous system	<input type="checkbox"/> Chick
<input type="checkbox"/> Cleavage	<input type="checkbox"/> Cloning	<input type="checkbox"/> Comparative	<input type="checkbox"/> Curriculum development
<input type="checkbox"/> Development	<input type="checkbox"/> Dictyostelium	<input type="checkbox"/> Differentiation	<input type="checkbox"/> Diffusion
<input type="checkbox"/> Dissection	<input type="checkbox"/> DNA	<input type="checkbox"/> Dorsal	<input type="checkbox"/> Drosophila
<input type="checkbox"/> Drug	<input type="checkbox"/> Ectoderm	<input type="checkbox"/> Educational research	<input type="checkbox"/> Embryology
<input type="checkbox"/> Endoderm	<input type="checkbox"/> Endothelial	<input type="checkbox"/> Endothelium	<input type="checkbox"/> Environmental factors
<input type="checkbox"/> Epithelial	<input type="checkbox"/> Epithelium	<input type="checkbox"/> Estrogen	<input type="checkbox"/> Ethics
<input type="checkbox"/> Evaluation tool	<input type="checkbox"/> Evolution	<input type="checkbox"/> Experimental design	<input type="checkbox"/> Eye
<input type="checkbox"/> Female	<input type="checkbox"/> Fertility	<input type="checkbox"/> Fertilization	<input type="checkbox"/> Fetal
<input type="checkbox"/> Fish	<input type="checkbox"/> Fluorescence	<input type="checkbox"/> Frog	<input type="checkbox"/> Funding
<input type="checkbox"/> G protein	<input type="checkbox"/> Gamete	<input type="checkbox"/> Gastrointestinal	<input type="checkbox"/> Gastrulation
<input type="checkbox"/> Gender	<input type="checkbox"/> Gene expression	<input type="checkbox"/> Gene regulation	<input type="checkbox"/> Gene targeting
<input type="checkbox"/> Gene transcription	<input type="checkbox"/> Gene transfer	<input type="checkbox"/> Genetic	<input type="checkbox"/> Germ cells
<input type="checkbox"/> Gestational biology	<input type="checkbox"/> Growth	<input type="checkbox"/> Growth factor	<input type="checkbox"/> Gut
<input type="checkbox"/> Heart	<input type="checkbox"/> Hemopoiesis	<input type="checkbox"/> Histology	<input type="checkbox"/> History - general
<input type="checkbox"/> Hormone	<input type="checkbox"/> Human	<input type="checkbox"/> Imaging	<input type="checkbox"/> Immune system
<input type="checkbox"/> In Vitro Fertilization (IVF)	<input type="checkbox"/> Induction	<input type="checkbox"/> Infertility	<input type="checkbox"/> Inner Cell Mass (ICM)
<input type="checkbox"/> Inquiry-based learning	<input type="checkbox"/> Intestine	<input type="checkbox"/> Intracellular	<input type="checkbox"/> Invertebrate
<input type="checkbox"/> Testosterone	<input type="checkbox"/> Urogenital	<input type="checkbox"/> Uterus	<input type="checkbox"/> Vertebrate
<input type="checkbox"/> Young	<input type="checkbox"/> Zebrafish	<input type="checkbox"/> Zygote	

+ All Additional Keywords

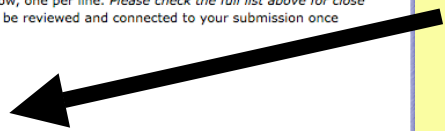
Suggested Additional Keywords
Please enter any additional single keyword or words in the box below, one per line. Please check the full list above for close matches first, and select them if so. Suggested keywords will first be reviewed and connected to your submission once approved.

Save and Complete Step 3

Click here to add the keywords that will help teachers and students searching for something like your LO find it.



Type in any additional keywords that are necessary. Save and complete Step 3.





Welcome Diana Darnell. You can access your saved searches and resources through the **My Archive** link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 4

Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
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Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Please select which language(s) and cultural aspect(s) fit your teaching resource.

Language(s)*

<input type="checkbox"/> Arabic	<input type="checkbox"/> Chinese	<input type="checkbox"/> Czech	<input type="checkbox"/> Danish	<input type="checkbox"/> Dutch	<input checked="" type="checkbox"/> English	<input type="checkbox"/> French
<input type="checkbox"/> German	<input type="checkbox"/> Greek	<input type="checkbox"/> Hebrew	<input type="checkbox"/> Italian	<input type="checkbox"/> Japanese	<input type="checkbox"/> Korean	<input type="checkbox"/> Latin
<input type="checkbox"/> Polish	<input type="checkbox"/> Portuguese	<input type="checkbox"/> Russian	<input type="checkbox"/> Spanish	<input type="checkbox"/> Swedish	<input type="checkbox"/> Turkish	

Cultural Aspect(s)* ?

<input checked="" type="checkbox"/> None	<input type="checkbox"/> Historical (specific eras)
<input type="checkbox"/> Cultural (specific cultures)	<input type="checkbox"/> Geographical (specific regions/countries)

Describe Cultural Aspects *(Not required)*

Funding Source(s)

<input type="checkbox"/> National Institutes of Health	<input type="checkbox"/> National Science Foundation	<input type="checkbox"/> NIH-SEPA Program
<input type="checkbox"/> None	<input type="checkbox"/> Other	

Other Funding Source(s)

Save and Complete Step 4

Choose the language(s)

Note cultural, historical or geographical linkage, if any

Identify your funding sources

Save and Complete Step 4



Welcome Diana Darnell. You can access your saved searches and resources through the **My Archive** link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 5

Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
----------------	-----------------------	--------------------	--------------------	------------------------	-----------------------	---------------------	----------------------	--------------------	-------------------

Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Please enter the author(s), publisher, and other contributors (if any) for your teaching resources. When you have all the authors or contributors entered, click on "Save and Complete Step 5". For each, you will first search for existing contributors, and then select if found, or enter new information if not found.

Keyword search by last name or organization.

Please select/enter the **FIRST AUTHOR** of this teaching resource.*

Search [Search](#) [Clear](#) [Use Me](#) (enter at least the first few letters of the name)

Please select/enter the **PUBLISHER** of this teaching resource.* (Note: Default is author) ?

Search [Search](#) [Clear](#) [Use Me](#) (enter at least the first few letters of the name)

Please select/enter any other contributors to this teaching resource.

Search [Search](#) [Clear](#) [Use Me](#) (enter at least the first few letters of the name)

[Save and Complete Step 5](#)

Please select/enter any other contributors to this teaching resource.

Search [Search](#) [Clear](#) [Use Me](#)

No matches found. Please search again or [add a new contributor](#).

Add the authors, publisher and any additional contributors. Click Use Me or type in part of the name and Search to find them in the database.



If they're not in the database yet, you can add them by clicking here

Creating a contributor record by filling in these boxes.

Pick a role for each contributor.

There must be at least one author and publisher.

First author is the default publisher if there is none.

Please select/enter any other contributors to this teaching resource.

Search

Please enter all required information to create a new contributor.

Title First Name MI Last Name*

Department Institution*


Address*

City* State* or Province

Zip/Postal* Country*

E-mail*


Phone* Fax

Role* 

Check if this information is you.

- Pick Role
- Author
- Contributor
- Editor
- Contact
- Other

Once you've added everyone, Save and Complete Step 5.


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Submit a Teaching Resource - Step 6

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Your Teaching Resource

Create more metadata.

Who is it for? →

How hard it is? →

How long does it take to use? →

What is it? →

Some submissions contain multiple resource types. Think about how people would search for your resource and link to those.

Please enter educational information about your teaching resource.

Who would use this teaching resource?*

Teacher
 Learner
 Manager
 Other - Please specify:

What is the difficulty level for this teaching resource?*

Please Choose

What is the typical learning time needed for this teaching resource?*

<=1 hour
 2-3 hours
 4-6 hours
 6-9 hours
 >9 hours

What type of teaching resource is this?*

Auditorium - Multimedia

<input type="checkbox"/> 35mm slide	<input type="checkbox"/> Animation	<input type="checkbox"/> Application	<input type="checkbox"/> Audio
<input type="checkbox"/> Diagram	<input type="checkbox"/> Digital presentation (Powerpoint)	<input type="checkbox"/> Discussion group/listserv	<input type="checkbox"/> Graph/Chart
<input type="checkbox"/> Illustration	<input type="checkbox"/> Image	<input type="checkbox"/> Map	<input type="checkbox"/> Online tool
<input type="checkbox"/> Photograph	<input type="checkbox"/> Short movies	<input type="checkbox"/> Simulation	<input type="checkbox"/> Software
<input type="checkbox"/> Table	<input type="checkbox"/> Video	<input type="checkbox"/> Webcast	

Classroom

<input type="checkbox"/> Assessment: exam w/o answer key	<input type="checkbox"/> Assessment: exam with answer key	<input type="checkbox"/> Assessment: other	<input type="checkbox"/> Assessment: tool
<input type="checkbox"/> Assignment/activity (non-laboratory)	<input type="checkbox"/> Course syllabus	<input type="checkbox"/> Fieldtrip guide	<input type="checkbox"/> Laboratory exercise
<input type="checkbox"/> Laboratory manual	<input type="checkbox"/> Lecture/lecture outline	<input type="checkbox"/> Lesson plan	<input type="checkbox"/> Study guide
<input type="checkbox"/> Teaching strategies & guidelines	<input type="checkbox"/> Tutorial		

Reading Room

<input type="checkbox"/> Abstract	<input type="checkbox"/> Biography	<input type="checkbox"/> Book	<input type="checkbox"/> Book chapter
<input type="checkbox"/> Journal	<input type="checkbox"/> Journal article/issue	<input type="checkbox"/> Meeting presentation	<input type="checkbox"/> Memo
<input type="checkbox"/> Newsletter	<input type="checkbox"/> Non-journal article	<input type="checkbox"/> Pamphlet/brochure	<input type="checkbox"/> Press release
<input type="checkbox"/> Proceedings	<input type="checkbox"/> Report	<input type="checkbox"/> Thesis/dissertation	

Reference Room

<input type="checkbox"/> Atlas	<input type="checkbox"/> Bibliography	<input type="checkbox"/> Database	<input type="checkbox"/> Dataset
<input type="checkbox"/> Dictionary/glossary	<input type="checkbox"/> Discussion group/listserv archive	<input type="checkbox"/> Index	<input type="checkbox"/> Manual
<input type="checkbox"/> Review	<input type="checkbox"/> Scientific standards and guidelines	<input type="checkbox"/> Thesaurus	

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Submit a Teaching Resource - Step 6

[Step 1 Main](#) |
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 [Step 3 Keywords](#) |
 [Step 4 Language](#) |
 [Step 5 Contributors](#) |
 [Step 6 Educational](#) |
 [Step 7 Standards](#) |
 [Step 8 Collection](#) |
 [Step 9 Resource](#) |
 [Step 10 Review](#)

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Your Teaching Resource

Select the teaching methods/pedagogy terms that describe this teaching resource.*

Broad Teaching Strategies			
<input type="checkbox"/> Active learning/discovery learning	<input type="checkbox"/> Bicultural/bilingual education	<input type="checkbox"/> Cooperative/small-group learning	<input type="checkbox"/> Critical analysis/critical thinking
<input type="checkbox"/> Hands-on learning	<input type="checkbox"/> Inquiry-based learning	<input type="checkbox"/> Large-group instruction	<input type="checkbox"/> Parent involvement
<input type="checkbox"/> Student-centered instruction	<input type="checkbox"/> Teacher-centered/traditional instruction	<input type="checkbox"/> Tutorial or self-directed instruction	
Additional Teaching Strategies			
<input type="checkbox"/> Block time teaching	<input type="checkbox"/> Case-based/case study approach	<input type="checkbox"/> Class/group discussion	<input type="checkbox"/> Data analysis, collection, interpretation
<input type="checkbox"/> Demonstrations	<input type="checkbox"/> Field laboratory experience/field trips	<input type="checkbox"/> Hypothesis testing	<input type="checkbox"/> Independent study
<input type="checkbox"/> Laboratory experiment	<input type="checkbox"/> Learning centers	<input type="checkbox"/> Learning cycles	<input type="checkbox"/> Peer teaching
<input type="checkbox"/> Problem sets/word problems	<input type="checkbox"/> Problem-based learning		
Use of Instructional Technology			
<input type="checkbox"/> Computer-assisted learning	<input type="checkbox"/> Multimedia/audiovisual instruction	<input type="checkbox"/> Other instructional technology use	
Authentic & Alternative Assessment			
<input type="checkbox"/> Peer evaluation	<input type="checkbox"/> Performance-based assessment	<input type="checkbox"/> Portfolios	<input type="checkbox"/> Self-evaluation
Tests & Testing			
<input type="checkbox"/> Cognitive tests	<input type="checkbox"/> Computer-assisted testing	<input type="checkbox"/> Essay tests	<input type="checkbox"/> Group testing
<input type="checkbox"/> Multiple-choice tests	<input type="checkbox"/> Norm referenced tests	<input type="checkbox"/> Objective referenced tests	<input type="checkbox"/> Open book tests
<input type="checkbox"/> Standardized tests	<input type="checkbox"/> Testing techniques	<input type="checkbox"/> Timed tests	<input type="checkbox"/> True-false tests
<input type="checkbox"/> Verbal tests			
Grading			
<input type="checkbox"/> Non-graded student evaluation	<input type="checkbox"/> Pass-fail grading	<input type="checkbox"/> Rubrics	<input type="checkbox"/> Ungraded classes

Save and Complete Step 6

For what learning style it is well suited? →

What technology is required? →

What assessment does it include? →


Then, click Save and complete Step 6.

If your LO can be used in the K-12 classroom, choose the K-12 content standards it supports.



These and other choices form the metadata that others will use to select your LO from the BEN and NSDL archives.

Save and Complete Step 7.

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Submit a Teaching Resource - Step 6

Step 1 Main | Step 2 Disciplines | Step 3 Keywords | Step 4 Language | Step 5 Contributors | Step 6 Educational | Step 7 Standards | Step 8 Collection | Step 9 Resource | Step 10 Review

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Your Teaching Resource

Please select which of the following standards (if any) fit your teaching resource.

Select the NSES curriculum/content standards information for this teaching resource. ?

Earth and Space Science

Changes in earth and sky (K-4) Objects in the sky (K-4)

Properties of earth materials (K-4)

History and Nature of Science

Science as a human endeavor (K-12)

Life Science

Life cycles of organisms (K-4) Organisms and environments (K-4)

The characteristics of organisms (K-4)

Physical Science

Light, heat, electricity, and magnetism (K-4) Position and motion of objects (K-4)

Properties of objects and materials (K-4)

Science and Technology

Abilities of technological design (K-12) Abilities to distinguish between natural objects and objects made by humans (K-4)

Understanding about science and technology (K-12)

Science as Inquiry

Abilities necessary to do scientific inquiry (K-12) Understandings about scientific inquiry (K-12)

Science in Personal and Social Perspectives

Changes in environments (K-4) Characteristics and changes in populations (K-4)

Personal health (K-8) Science and technology in local challenges (K-4)

Types of resources (K-4)

Unifying Concepts and Processes

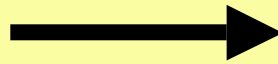
Change, constancy, and measurement (K-12) Evidence, models, and explanation (K-12)

Evolution and equilibrium (K-12) Form and function (K-12)

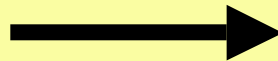
Systems, order, and organization (K-12)

Save and Complete Step 7

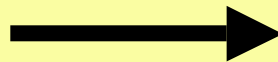
Choose the type of collection. A slide show would be linear, a web page would be a Network.




If this is one part of a set of similar or related resources, link them together.



Include citations to publications about this LO.



Save and Complete Step 8.

 **SOCIETY FOR DEVELOPMENTAL BIOLOGY** www.sdbonline.org
A Collaborative Digital Library

Search the Archive | My Archive | Submit a Teaching Resource | Help/FAQ | More Information | Resources by Level

Welcome Diana Darnell. You can access your saved searches and resources through the [My Archive](#) link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 6

Step 1 Main | Step 2 Disciplines | Step 3 Keywords | Step 4 Language | Step 5 Contributors | Step 6 Educational | Step 7 Standards | Step 8 Collection | Step 9 Resource | Step 10 Review

Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Indicate whether the teaching resources is a *single item* or to what kind of *collection* it belongs.*

- Single Item** ? Single item (e.g., slide)
- General Collection** ? General Collection (General group of single items; e.g. slide set on types of muscles)
- Linear Collection** ? Linear collection (group of related items that should be used in sequence; e.g., PowerPoint presentation; series of slides showing how muscle responds to an impulse)
- Hierarchical Collection** ? Hierarchical collection (Group of same items each of which builds on the previous one to show more detail; e.g., series of slides showing ion pathways through the cell membrane that build up sequentially to more detail)
- Network Collection** ? Network collection (Group of interrelated items; e.g., Web site)

Explain item/collection if necessary *(Not required)*

Other Teaching Resources in this Collection *(Automatically added by cloning in Step 10.)*

Search **Search** **Clear** *(enter part of the title for an exact match)*

Other Related Teaching Resources *(Others by the same author will be automatically linked.)*

Search **Search** **Clear** *(enter part of the title for an exact match)*

Related Research Papers *(Please enter Web site or specify citations, e.g., Am. J. Physiol. 236:C82-097, 1998)*

Save and Complete Step 8

You're almost done!

Paste in your URL or upload the file here. You may be asked for the file format, too.

List any special technical requirements.

Save Step 9

The screenshot shows the 'Submit a Teaching Resource' process on the Society for Developmental Biology website. The page is titled 'Submit a Teaching Resource - Step 9' and features a navigation bar with steps 1 through 10. Step 9, 'Resource', is highlighted in red. Below the navigation bar, there is a section for 'Your Teaching Resource' with a text area for providing a link or uploading a file. A yellow box prompts the user to 'Please choose to enter a URL or upload a teaching resource.*' with radio buttons for 'URL' (selected) and 'File Upload'. A text input field is provided for the URL, and a 'Submit URL' button is next to it. Below this, another yellow box asks for 'Please list any special technical requirements for accessing this teaching resource.' with a text area for input. At the bottom, a red button labeled 'Save and Complete Step 9' is visible.

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Search the Archive My Archive Submit a Teaching Resource Help/FAQ More Information Resources by Level

Welcome Diana Darnell. You can access your saved searches and resources through the [My Archive](#) link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 6

Step 1 Main Step 2 Disciplines Step 3 Keywords Step 4 Language Step 5 Contributors Step 6 Educational Step 7 Standards Step 8 Collection Step 9 Resource Step 10 Review

Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Submit a Teaching Resource - Step 9

Step 1 Main Step 2 Disciplines Step 3 Keywords Step 4 Language Step 5 Contributors Step 6 Educational Step 7 Standards Step 8 Collection Step 9 Resource Step 10 Review

Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Please give us a link to your teaching resource or upload it here.
The system will detect what type of file it is, and prompt you for more information if necessary.

Please choose to enter a URL or upload a teaching resource.*

URL File Upload - Enter Full URL ?

Please list any special technical requirements for accessing this teaching resource. ?
(e.g. - special software or hardware requirements) (Required for ZIP files.)

Yeah! You're done. If you are putting in a collection or another resource with many of the same features, Make a clone and edit it instead of starting from scratch.

Then click Submit and Finish. We'll do the rest!

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SOCIETY FOR DEVELOPMENTAL BIOLOGY A Collaborative Digital Library

Search the Archive My Archive Submit a Teaching Resource Help/FAQ More Information Resources by Level

Welcome Diana Darnell. You can access your saved searches and resources through the [My Archive](#) link above. You have 1 incomplete submissions.

Submit a Teaching Resource - Step 6

Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
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Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Review and Complete Submission - Step 10

Step 1 Main	Step 2 Disciplines	Step 3 Keywords	Step 4 Language	Step 5 Contributors	Step 6 Educational	Step 7 Standards	Step 8 Collection	Step 9 Resource	Step 10 Review
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Do not use the forward and back buttons in your browser during this process. Move forward using the red "Save" buttons. Blue bar links will not save any changes made, but you can move to any step after saving.

Your Teaching Resource

Please review the information below to make sure your submission is complete. You must click the "Submit & Finish" button at the bottom to submit your teaching resource. This button will appear only when all information is complete.

Teaching Resource Information

All Steps	COMPLETE!
-----------	-----------

You may also make a clone of this record now (or later from the [My Submissions](#) link in My Archive above). This will copy everything into a new teaching resource except for the resource URL or file itself. This will allow you to change the title and anything else, yet still keep all of your other settings for a related group of teaching resources. You can choose to then edit settings on all of them before submitting each in turn. **You will find your cloned submission under the [My Submissions](#) link in "My Archive" above.**

Make a Clone

You may also clone this so that each will be part of the same Collection (see Step 8) automatically.

Make a Clone to the Same Collection

Clicking on the final submission button submits your teaching resource. You will not be able to edit it after that point. If you need to, please contact archive@the-aps.org.

Don't forget to go submit any cloned resources (access them through [My Archive/My Submissions](#)).

Submit & Finish

You may also withdraw this resource. **This will completely delete the item after confirmation.**

Withdraw Resource

"Never believe that a few caring people can't change the world. For, indeed, that's all who ever have."

Margaret Mead

- Thank you for submitting your Learning Object to the SDB LEADER archive. The archivist will send it out to 2 reviewers. When their comments are in, she'll email you with comments, revision suggestions or news of your new peer-reviewed publication!

Questions: contact Diana Darnell
Darnell@email.arizona.edu

Reviewers Evaluating LOs look for:

Scientific Accuracy

Sufficient LO narrative (could others use it correctly?)

Background/supportive sources listed

Educational Relevancy

Pedagogical Effectiveness

Appropriate animal use and care instructions

Technical details (grammar, links okay?)

Appropriate metadata

No copyright violations

Become a Reviewer!!!

- Be the first to see great new LOs!
- Help out other educators and students!
- Expand your national service to SDB!

Send me an email (darnell@email.arizona.edu) with your name, department, institution, phone number and areas of expertise/interest.

How to use BEN with your Class?

- Go to: www.biosciencednet.org

Sign in (for tracking)
Put in key words & level
Or other metadata

Browse the LOs that fit

Pick one and check it out!

The screenshot shows the homepage of the BEN (Bioscience Digital Library) website. The header features the BEN logo and navigation links: HOME, ABOUT, K-12 EDUCATORS, COLLEGE FACULTY, CONTRIBUTORS, and SIGN IN. Below the header is a search bar with a dropdown menu for 'All Audience Levels' and a 'Free records only' checkbox. The main content area includes a 'WELCOME' message, a 'NEW RESOURCES' section with a pink image, and a 'Teaching STRATEGIES' section. The footer contains links for SITE MAP, CONTACT, and POLICIES, along with logos for AAAS, NSF, and NSDL. Funding information and copyright details are also provided.

HOME ABOUT K-12 EDUCATORS COLLEGE FACULTY CONTRIBUTORS SIGN IN

ben
BIOSCIEDNET DIGITAL LIBRARY PORTAL FOR TEACHING AND LEARNING IN THE BIOLOGICAL SCIENCES

SEARCH [] All Audience Levels [v] Free records only [x] Go

[SIGN IN](#) [Advanced Search](#)

WELCOME

Welcome to the BEN portal, the National Science Digital Library (NSDL) Pathway for biological sciences education. The BEN Portal provides access to education resources from BEN Collaborators and is managed by the American Association for the Advancement of Science (AAAS). Over 6,636 reviewed resources covering 77 biological sciences topics are available. BEN resources can help you engage student interest, shorten lesson preparation time, provide concept updates, and develop curricula that are in line with national standards for content, use of animals and humans, and student safety.

Registration is required in exchange for access to the wealth of information freely available through the BEN Portal. Our [privacy policy](#) provides detailed explanation on what information is collected, protected, and used. **Register** to join our community of 8,885 biological science educators.

NEW RESOURCES

Teaching STRATEGIES

Use a t approach the effi mediati hydrog

Access

[Conference](#)

SITE MAP | CONTACT | POLICIES

AAAS NSF NSDL

Funded by the individual BEN Collaborators and grants from the National Science Foundation [DUE 0085840 / DUE 0226185]

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SOCIETY FOR DEVELOPMENTAL BIOLOGY

LEADER

Library of **E**ducational **A**nnnotated **D**evelopmental biology **R**esources **Needs YOU!**

LEADER is a searchable database of peer-reviewed educational resources in developmental biology for teachers and students at all levels.

Submit your digital:

active learning exercises
assessment strategies
PowerPoint slides
fieldtrip guides

lab exercises
lesson plans
glossaries
animations

learning games
simulations
short movies
web sites

tables
exams
syllabi
images

Soon your material could be helping other students and faculty understand
Developmental Biology when they access it through

The BEN Portal

<http://www.biosciEdNet.org/portal/>



OR

The National Science Digital Library

<http://nsdl.org/>



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LEADER is a searchable database of peer-reviewed educational resources in developmental biology for teachers and students at all levels.

To submit or become a reviewer contact Diana Darnell at

darnell@email.arizona.edu

Soon your material could be helping other students and faculty understand
Developmental Biology when they access it through

The BEN Portal

<http://www.biosciEdNet.org/portal/>



OR

The National Science Digital Library

<http://nsdl.org/>

