

**Worksheet 5-5—
Lesson Plan**

Format

(adapted with permission)

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| Subject: Biology | Teacher: Shirley Cobble/Lisa Love |
| Lesson Name: DNA model | Location: Wendell High School |
| Class: Honor’s Biology | Unit Context: DNA |
| Date: March 2009 | |

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| <p>Activities Build a model of DNA with M&M’s candies.</p> | <p>Big6™ Skills</p> <ol style="list-style-type: none"> 1. TD – Build and replicate a strand of DNA with one mutation shown. 2. ISS – Use your textbook and the LiLi –D to find pictures and information about how to build the model and how a mutation would be shown. 3. L&A – Gather the M&M’s from the teacher – determine how many different colors will be needed. 4. UI – Read textbook and find diagrams about DNA in the LiLi-D and nitrogenous bases as well as different types of mutations. E.g. frameshift mutation 5. S- Put together the project. 6. E – Share project with student near you correcting each others if needed. Then show the project to the teacher. | <p>Idaho Science Standards</p> <p>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</p> <p>Goal1.6: Understand Scientific Goal Inquiry and Develop Critical Thinking Skills</p> |
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Learning Context:

Biology students will be making a DNA model with M&M's that shows replication of a DNA strand and one mutation that could happen.

Materials/Resources:

- M&M's candies with at least 8 different colors
- Textbook
- The LiLI Databases

Evaluation:

- Completion of project and checking another student's project. Teacher will check the final project before the student can eat their M & Ms.

Notes:

This is after some learning has been done on DNA and how a mutation may form.

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|---------------------------------|------------------------------------|
| Subject: Physics of Flight | Teacher: Shirley Cobble/Lisa Love |
| Lesson Name: Bird Watching Plus | Location: Wendell High School |
| Class: Physical Science | Unit Context: Culminating Activity |
| Date: Third tri | |

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| <p>Activities:</p> <p>Go out into the field and watch for a variety of birds and how they take off, land, turn, and glide.</p> <p>Identify as many different types of birds as possible after being taught how to recognize different species.</p> <p>Prepare a group poster of the birds found and relate how they fly, take off, land and glide as compared to different wing types in airplanes.</p> | <p>Big6™ Skills</p> <ol style="list-style-type: none"> 1. TD – How do birds fly and what are the different types of birds around the school? 2. ISS –Principal Jon Goss teach about how to identify birds in our area for one class period. 3. L&A – With the textbook, library books about birds, LiLI-D and previous notes draw the different wing types and how they are used to land, take off, and glide. 4. UI – Go into the field and watch for any birds. Identify the birds with the bird books supplied and discussion among the group. 5. S – Organize the information gathered on a poster to present to the group. 6. E – The group that has the most numbers of different birds found wins for the group competition and then the demonstration of how birds fly compared | <p>Idaho Science Standards</p> <p>Goal 2.2: Understand Concepts of Motion and Forces</p> <p>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</p> <p>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</p> |
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| | to airplanes is in the rubric. | |
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Learning Context:

Go on a field trip to tie together all the previous learning about flight that has been done. Along with this is an activity with the school principal who is an avid bird watcher. The students will spend one class period with him learning how to identify birds in this area.

Materials/Resources:

Textbook

Library books about birds

DVD of birds and bird calls

LiLI Databases

All previous activities and learning has been done to understand how things fly.

School principal – bird watcher expert

Evaluation:

Use the big6 rubric for judging the poster with the librarian grade being the principal's grade instead.

Notes:

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| | |
|--|-----------------------------------|
| Subject: Minerals | Teacher: Shirley Cobble/Lisa Love |
| Lesson Name: Idaho’s Minerals Impact on Daily Life | Location: Wendell High School |
| Class: Earth Science/Geology | Unit Context: Ecology |
| Date: 2 nd trimester | |

Activities

Prepare a Power Point, display, report, or dramatization of how Idaho’s minerals affect us.

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| <p>Big6™ Skills</p> <ol style="list-style-type: none"> 1. TD – How are Idaho’s minerals affecting the lives of Idahoans and the country/world? The PP should have at least 10 slides, the report should be at least 3 to 5 pages with 12 font, discuss display or dramatization ideas with the teacher beforehand. 2. ISS – Use textbooks, Lill-D and on-line encyclopedias to determine your project. 3. L&A - Review your textbooks and the chapter on minerals. Plan with your group which mineral(s) you will present. Spend one day in the library accessing the information on LiLI-D and the on-line encyclopedias for your project. 4. UI – Based on the project chosen prepare 2 column notes showing the properties, uses and value of your mineral(s). 5. S – Put together your project and then present it to the rest of the class. 6. E – Use of the rubric that was prepared by the students and the teacher determine how well your project was done. In the | <p>Idaho Science Standards</p> <p>Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them</p> <p>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</p> |
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| | rubric is also an area for the librarian to evaluate the work performed while in the library. | |
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Learning Context:

Materials/Resources:

- Textbooks
- Library
- Power point, poster, display materials
- Lill-Databases
- Online/hardcopy encyclopedias

Evaluation:

Use of the Big6 Assessment Scoring Guide which is adapted for this project.

This project will be scored by the student, teacher, and the librarian.

Notes:

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Format

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Subject: Physical Science

Teacher: Shirley Cobble/Lisa Love

Lesson Name: Scientists Influence

Location: Wendell High School

Class: Physical Science

Unit Context: History

Date: May or end of year

Activities

In the Physical Science Class the students will research various scientists and how they influenced history by writing a formal term paper.

Big6™ Skills

1. TD – From the list of scientists, the students will chose one person and research how this person influenced history. The students will work in word and prepare a formal paper. They need to cite 5 sources with MLA format with 3 selections from books, one from LiLI and one other source. The paper should be between 3 & 5 pages.
2. ISS –Students will review books, periodicals & other databases to extract their information.
3. L&A –Students will go to the library and access the card catalog, and databases to find their information.
4. UI –Students will read and review their sources and prepare an outline and rough draft for peer review by Wed. They must use either an outline, power notes or graphic organizers before they begin their

Idaho Science Standards

Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors.

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| | <p>written report.</p> <p>5. S –Students will turn in the outline and rough draft on Friday for the teacher review. The final paper will be due the following Friday.</p> <p>6. E –Use the Big6 Assessment Scoring Guide with student, teacher an librarian evaluating made up of the term paper checklist.</p> | |
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Learning Context:

The students will learn about various scientists and how they influenced history through a formal research paper according to MLA format with 5 different sources.

Materials/Resources:

- Textbooks
- LiLI Databases
- Online databases
- Library books

Evaluation:

Use the Big6 Assessment Scoring Guide rubric as determined by the Wendell High School English department and MLA format.

Notes: