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**Cell Division**

Science Eighth Grade

Designed by

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Source: <http://robs1987.blogspot.com/2011/02/unforgettable-lecture-on-human.html>

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**Introduction**

Living cells divide to form new cells in order to repair worn-out or damaged tissues throughout an organism, and (in the gametes only) to enable the exchange of genetic material at the initial stage of the process of sexual reproduction. (A gamete is a mature sex cell, specifically the ovum of the female or the spermatozoon of the male.)

The two types of cell division are generally called **mitosis** and **meiosis** but, strictly, these terms refer to the stages of division of the cell nucleus for somatic (non-reproductive) and reproductive cells, respectively.

Why in some cases1= 2 and 2=1?

**The Task**

Describe crisply and clearly what the end result of the learners' activities will be. The task could be a:

1. problem or mystery to be solved;
2. summary to be created;

**The Process**

To accomplish the task, what steps should the learners go through? Use the numbered list format in your web editor to automatically number the steps in the procedure.

1. First you need to collect data about Asexual Reproduction

2. Then you need to know about Mitosis

3. After that you must search information on Sexual Reproduction

4. Finally you should know about Meiosis

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| **Asexual Reproduction** |
| Why does asexual reproduction still has a two fold benefit over the short term period?<http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/A/AsexualReproduction.html><http://biology.about.com/od/genetics/ss/Asexual-Reproduction.htm> |
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Learners will access the on-line resources that you've identified as they go through the Process. You may have a set of links that everyone looks at as a way of developing background information, or not. If you break learners into groups, embed the links that each group will look at within the description of that stage of the process. (Note, this is a change from the older WebQuest templates which included a separate Resources section. It's now clear that the resources belong in the Process section rather than alone.)

In the Process block, you might also provide some guidance on how to organize the information gathered. This advice could suggestions to use flowcharts, summary tables, concept maps, or other organizing structures. The advice could also take the form of a checklist of questions to analyze the information with, or things to notice or think about. If you have identified or prepared guide documents on the Web that cover specific skills needed for this lesson (e.g. how to brainstorm, how to prepare to interview an expert), link them to this section.

Internet resources that you plan to send the students to should be linked in this section. When writing the link, do not just paste the url onto the page. Write a statement about the page and what your students could expect to find there. For example:

Volcanoes in the Learning Web is a web site maintained by the U S Geological Service. This site provides an excellent overview of the subject and includes cutaway drawings as well as some great photos

The web site that I want my students to visit is <http://www.usgs.gov/education/learnweb/volcano/index.html> I could just paste this URL at the end of the statement I made, but there is a better way.

1. Compose the description of the site and what your students should expect to find there.
2. Go to the Internet and copy the URL of the web site
3. Highlight the words that you wish to turn into a hyperlink. In my example I selected " Volcanoes in the Learning Web"
4. Choose Insert, then select Hyperlink
5. In the Insert Hyperlink place the URL of the site into the box that says Link to File or URL. (Warning to Macintosh users: you casn not paste there, you must type the URL in the box.)
6. The statement above is changed, now the highlighted words act as a hyperlink just like on the Internet.

[Volcanoes in the Learning Web](http://www.usgs.gov/education/learnweb/volcano/index.html) is a web site maintained by the U S Geological Service. This site provides an excellent overview of the subject and includes cutaway drawings as well as some great photos

**Evaluation**

Describe to the learners how their performance will be evaluated. Specify whether there will be a common grade for group work vs. individual grades.

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| --- | --- | --- | --- | --- | --- |
|  | **Beginning****1** | **Developing****2** | **Accomplished****3** | **Exemplary****4** | **Score** |
|  Stated Objective or Performance  | Description of identifiable performance characteristics reflecting a beginning level of performance. | Description of identifiable performance characteristics reflecting development and movement toward mastery of performance. | Description of identifiable performance characteristics reflecting mastery of performance. | Description of identifiable performance characteristics reflecting the highest level of performance. |  |
|  Stated Objective or Performance   | Description of identifiable performance characteristics reflecting a beginning level of performance. | Description of identifiable performance characteristics reflecting development and movement toward mastery of performance. | Description of identifiable performance characteristics reflecting mastery of performance. | Description of identifiable performance characteristics reflecting the highest level of performance. |  |
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**Conclusion**

Put a couple of sentences here that summarize what they will have accomplished or learned by completing this activity or lesson. You might also include some rhetorical questions or additional links to encourage them to extend their thinking into other content beyond this lesson.

**Credits & References**

List here the sources of any images, music or text that you're using. Provide links back to the original source. Say thanks to anyone who provided resources or help.

List any books and other analog media that you used as information sources as well.

Last updated on November 29, 1999. Based on a template from [The WebQuest Page](http://edweb.sdsu.edu/webquest/webquest.html)