Life Stages of A Sexually Reproducing Coral

Summary
Students will assemble, in order, lifecycle stages of a sexually reproducing coral using pictures and words.

Objectives
- Students will differentiate between sexual and asexual coral reproduction and be able to describe each mode in detail.
- Students will arrange the lifecycle stages of a sexually reproducing coral.

Materials
Coral Life Cycle Pictures (1 per student)
Coral Life Cycle Descriptions (1 per student)
Coral Life Cycle Diagram (1 per student)
Videoclips of coral reproduction (see resources section)
Life Cycle Stage Poster (see directions below in teacher prep)

Making Connections
Students learned about the life cycle of coral by acting it out in the previous lesson. Now, they will build upon their knowledge by expressing what they know in additional ways (i.e., drawing and writing).

Teacher Prep for Activity
Photocopy the “Coral Life Cycle Pictures”, “Coral Life Cycle Descriptions”, and “Coral Life Cycle Diagram” for each student. Find a videoclip of the coral lifecycle found on the coral reefs or resources pages of the PRISM website or from a coral video. Make a poster of the coral life cycle by enlarging the 3 Coral Life Cycle Handouts. Cut out the life cycle stages pictures and descriptions. Attach Velcro to the back of each stage of reproduction for attachable and detachable life cycle stages. This poster will be used for a class demonstration and a discussion on the coral life cycle.

Background
No additional background is necessary
Procedure

1. Distribute the “Coral Life Cycle Pictures” page to each student.
2. Have the students cut out the lifecycle-stage pictures from their handout and arrange the lifecycle stages in the order that they think would occur without pasting.
3. Ask for volunteers to share their predictions on order of the coral life cycle pictures. Record one prediction on the board as the class example.
4. Pass out the lifecycle stage descriptions and again have the students cut the out and put them in order without pasting.
5. Ask for volunteers to share their predictions on the order of the coral life cycle descriptions. Record one prediction on the board next to the pictures order as the class example.
6. Have students pair up and discuss with their partner why they put the stages in that certain order. Explain that they should work together to decide on one final order for the pictures and the descriptions. After discussion, instruct the students to write (at the bottom of the page) why they chose the final order that was decided upon.
7. Discuss as a class why pairs came up with the order that they did. Refer to the two examples on the board and ask if they feel differently about their predictions after discussion. If so, Why? Using the life cycle stage poster, have volunteers come up and place each life cycle stage. See if the class agrees with the stage placement of the volunteer student.
8. Have students watch a video clip (if the clips are short it may be helpful to watch a few on the life cycle of a coral.
9. Use the large, poster-sized coral life cycle materials to discuss what the students saw and learned while watching the video. Guide the students through a step-by-step analysis of the coral life cycle using the video as a reference (it may be necessary to watch some sections of the video a second time to refresh the students memories) and the velcro, cut-out stages to place on the poster.
10. Once the class has determined the actual life cycle in the correct order, double check the poster accurately depicts the cycle. **NOTE: Use the diagram answer key on pg. 6 to check your work!**
11. To end the session, refer the students back to their handouts for possible revisions. See if partners need to meet to make self-corrections of their picture/description order of the life cycle and if necessary. Have them paste their decided upon life cycle stage order including the pictures and descriptions on the “Coral Life Cycle Diagram” sheet.

**Homework:** Journal entry on how the life cycle of a coral is different from the life cycle of a human.

**Assessments**

Completed worksheets and discussions

**Resources**

2. [http://www.youtube.com/watch?v=4WDhhllkJAs](http://www.youtube.com/watch?v=4WDhhllkJAs)
3. [http://www.youtube.com/watch?v=JYm_WV8-CbU](http://www.youtube.com/watch?v=JYm_WV8-CbU)
4. [http://www.youtube.com/watch?v=zOzz0zTYZvc](http://www.youtube.com/watch?v=zOzz0zTYZvc)
Cut out the pictures of the coral life stages and arrange them into the diagram in the order that you believe they should go. Follow the arrow to put your pictures in the right order.

Coral Life Cycle Pictures
Coral Life Cycle Diagram          Name__________
Coral Life Cycle Descriptions

Cut out the descriptions of the coral life stages and arrange them into the diagram in the order that you believe they should go.

<table>
<thead>
<tr>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg meets sperm</td>
</tr>
<tr>
<td>Development of zygote</td>
</tr>
<tr>
<td>Release of sperm and egg bundles from mature corals that quickly rise to the surface</td>
</tr>
<tr>
<td>Colony begin to grow through polyp budding</td>
</tr>
<tr>
<td>Planula larvae develops and drifts with currents</td>
</tr>
<tr>
<td>Colony sexually matures in 4-5 years</td>
</tr>
<tr>
<td>Planulae settles and polyp begins to develop laying down a skeleton</td>
</tr>
</tbody>
</table>
Coral Life Cycle Diagram KEY

Planulae settles and polyp begins to develop laying down a skeleton

Development of zygote

Egg meets sperm

 Colony begin to grow through polyp budding

Colony sexually matures in 4-5 years

Release of sperm and egg bundles from mature corals which quickly rise to the surface

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