Lesson 3: Research with Model Organisms

Jigsaw Activity

**Directions:**

1. Your teacher will assign you to a “home” group in which everybody is assigned a different article about a particular experiment/study that involved a model organism.
2. Read your assigned article.
   1. [Article #1](https://www.sciencejournalforkids.org/wp-content/uploads/2023/05/armadillo_article.pdf): “*Can armadillos show us how to regrow a liver?*”
   2. [Article #2:](https://www.sciencejournalforkids.org/wp-content/uploads/2022/10/mole_rats_article.pdf) “*What can we learn about aging from naked mole-rats?”*
   3. [Article #3:](https://www.sciencejournalforkids.org/wp-content/uploads/2019/09/probiotics_article.pdf) *“How do bacteria in the gut control the brain?*”
   4. [Article #4:](https://www.sciencejournalforkids.org/wp-content/uploads/2020/03/Nanoparticles-article.pdf) “*How can gene editing cure disease?*”
3. Reread the article and complete an outline based upon the experiment/study discussed in your article. Write your outline on a separate sheet of paper using the format below.

| Model Organism:  Observations:  Question:  Hypothesis:  Experiment:   * Materials: * General Procedure: * Variables:   Results:  Conclusion: |
| --- |

1. The teacher will now assign you to an “expert” group in which everybody has the same article as you. Your group will verbally discuss the experiment/study and share your outlines. Together, compose a brief summary of the article and record it in the appropriate box below.

| *Article #1 Summary:* | *Article #2 Summary:* |
| --- | --- |
| *Article #3 Summary:* | *Article #4 Summary* |

1. Return to your “home” group and share your summaries with each other. Complete the table on the previous page.
2. With your “home” group answer the following analysis questions:
   1. Why do you think model organisms were used in these experiments?
   2. How can human health be improved by performing biomedical research? In your response, be sure to incorporate the results from the experiments you discussed with your group.
   3. How can these experiments be improved or modified in the future?
   4. Use your knowledge of the scientific method to explain why all of these experiments were successful.