

Research Jigsaw: Build context for an investigation (1 to 2 class periods)

Students work in teams to gather background information that will provide context for their investigation and inform predictions.

Learning Outcomes: Students will be able to...

- Identify the purpose of their investigation
- use information from multiple sources to form a logical prediction

Standards Alignment:

MLR	CCSS	NGSS
B1.a. Identify questions that can be answered through scientific investigations.	CCSS.ELA-LITERACY.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. CCSS.ELA-LITERACY.RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.	Practice 8: Obtaining, evaluating, and communicating information. MS-LS2-2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

Materials:

Computers and access to the internet

Teacher preparation:

1. Assign students to fieldwork teams of four students.
2. Optional: research and add links for students to use in the instructions for the expert groups. Typical expert roles include:

Community expert: researches how the local community may be affected by the topic.

Ecosystem expert: researches how other living and nonliving parts of the ecosystem are connected to the topic,

Data expert: looks at existing data related to the investigation.

Species expert: researches life-cycle, characteristics, behavior of the species that contribute to understanding of the research topic.

Lesson sequence:

1. Have students complete the “Do now” from the student handouts.
2. Review the focus of the class investigation and the big question that they are trying to answer as students complete the “Investigation Overview” on the student handout. If students are doing a Vital Signs mission, give them time to explore the mission page.

3. Invite students to share any questions that they have or ideas of what they need to know in order to better understand their investigation (from the “Do now”).
4. Explain that students are going to work in teams to find out more. Divide the class into their fieldwork teams.
5. Explain that each student within the team is going to be an expert on one particular topic. Introduce the topics, and let students choose their expert role. Let students know that they will be expected to report out on their topic to the rest of their team.
6. Have students move into new groups so that all of the experts with the same role are together in a group. Give students 20 to 30 minutes to conduct research on their topic.
7. Have students go back to their fieldwork teams to report out on their research.
8. Once students have reported back, they should use the information that they gathered to define the purpose of their investigation and form a prediction about their results (using the questions in the student handout).

Modification idea: assign texts at different reading levels to each expert role, then assign students to expert roles according to their reading ability—a great way to differentiate for diverse learners.