## Synopsis
In this hands-on investigation, students will observe, collect, identify, and illustrate macroinvertebrates from the Logan River near the Stokes Nature Center. They will further study the watershed and engage in argument about why certain organisms are more prevalent than others. Students will explore watershed health and the systems in place in the study area habitat. They will then discuss potential changes in the environment and what impact those changes might have. Each student will be given a program specific field guide to record their observations and thinking during the program. The field guide may serve as a tool for students to continue their learning in SEEed Strand 3.2.

## Objectives - Students will:
- Participate in group & individual exploration of nature
- Make close observations
- Collect and identify macroinvertebrates using appropriate tools
- Graph data
- Develop an understanding of watersheds and pollution
- Draw conclusions about stream health
- Consider the impacts of potential changes in the environment on plants & animals living there
- Propose solutions to negative impacts

### Length of Program: 2 hours
### Season(s) Offered: Fall or Spring
### Location: Stokes Nature Center
### Program Fee: $6 per student

### Logistics:
- The school bus should drop you off at the Stokes Nature Center trailhead of the River Trail in Logan Canyon (on the south shoulder of the highway).
- The program will begin and end at the Stokes Nature Center. Please allow 7-10 minutes for your class to walk the trail at the beginning and the end of the day.
- Please have a plan for dividing your group in half, each smaller group should include a teacher or staff from your school.
- Students should wear comfortable clothing that may get dirty and/or wet.
- We will be outside for the entirety of this program, dressing in layers is advised.
- Closed toe shoes are appropriate. Please, no flip flops!
- Students should wear visible name tags at all times (packing tape over a name tag keeps them from falling off).
- Please bring one adult per five students. There is no charge for teachers or adult chaperones.
- Restrooms are available inside the Nature Center.
- Running water will not be available at the site, so please plan ahead with water bottles.

See curriculum connections and Classroom Teacher Pre-Program Preparation on the next page.
Classroom Teacher Pre-Program Preparation

- If multiple classrooms from your school are participating, please ensure that all teachers on your team receive the confirmation email which contains essential information about your scheduled field experience.

Curriculum Connections

SEEd Strand 3.2

<table>
<thead>
<tr>
<th>Science and Engineering Practices</th>
<th>Crosscutting Concepts</th>
<th>Disciplinary Core Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking Questions or Defining Problems</td>
<td>Patterns</td>
<td>Ecosystems</td>
</tr>
<tr>
<td>Constructing Explanations</td>
<td>Systems</td>
<td>Biological Evolution</td>
</tr>
</tbody>
</table>

Additional Utah Core Curriculum Connections

<table>
<thead>
<tr>
<th>English Language Arts</th>
<th>RI3.7      SL3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>3.MD.3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3.2  3.4</td>
</tr>
<tr>
<td>Social Emotional Learning CASEL Competencies</td>
<td>Self-Awareness, Self-Management, Social-Awareness, Relationship Skills, Responsible Decision-Making</td>
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