



Guidance for developing an EYH Workshop

As a workshop leader, you will be responsible for planning a 75 minute lesson centred on a scientific concept or theme in your discipline for girls aged 11- 14 years old. In addition to planning the workshop, you will be responsible for sourcing their supply which will be reimbursed if pre-approved.

We encourage you to read through the instructions carefully and get in touch with any questions. We are happy to discuss your workshop plan.

How do I design a great workshop for EYH?

Create a list of things that make you super excited to be a scientist: experiments, experiences, equipment, questions, etc. – Think about your own research and about facilities and equipment that students might not be exposed to in their classroom. We are looking for unique experiences that expose girls to what it is like to be a working scientist or engineer. Think about what you do all day as a scientist—how can you give the girls a taste of this experience?

1. **Narrow this list down to 2-3 ideas** – Cut out any workshops that would require too much pre-knowledge or too much explanation on your end. Cut out anything that doesn't involve girls doing hands-on activities!
2. **Get feedback/input!** – Come with a few ideas you're throwing around and let us help you form them into a workshop! EYH is available to work with you one-on-one to build a workshop that will leave kids thinking, "Wow! Science!" afterwards.
3. **Once you've picked your workshop, choose 2-3 learning objectives (max!)** – Instead of "Students will learn/understand..." use active words like "Students will identify/engage with/design/construct..." In one hour, give a girl an idea of what scientists do, not what scientists know.
4. **Design activities to help them meet these objectives (learning by doing!)** – See below for two examples of what the workshop might look like. Think through what materials/resources/man power you'll need to make this happen.
5. **Submit your Workshop Application to events@elargistehorizons.ch**

A good 75 minute workshop *might* look something like:

Try using the [5E's workshop model](#) with minimum use of wordy powerpoint slides.

1. **Engage (5-15 min) – Pique their interest!**
Begin with an activity that engages students and access information they already know. During this activity, they will articulate questions they have about the world, or define issues/problems that they do not yet know how to solve.

2. **Explore** (20-40 min) – **Get them involved through self-discovery!**
Facilitate activities where students are discovering things about the world. Design self-guided activities for students to make hypotheses, test them, and draw conclusions.
3. **Explain** (10-15 min) – **Ask them to communicate their findings!**
Give students the language to understand what they just discovered. Individually, or in small groups, or in large groups, have students express in words what they have learned. Ask leading questions to be sure they met your learning objectives.
4. **Extend** (5-10 min) – **What are the implications this new knowledge has?**
Ask how their learning connects to other related concepts. Ask how it will affect how they think about an issue, or approach a new problem. What now?
5. **Evaluate** (5 min) – **Did they learn it?**
Ask for feedback to check if each student learned what you wanted them to (and what you didn't know they would!). Use this to inform your own practice and make small tweaks to your lesson before the next workshop!

See here is a good example of what a well-constructed and memorable workshop looks like

A well-constructed and memorable workshop:

1. **Do Now** (5min)
There should be something for students to start right away upon entering your workshop, often calling upon students to recall/share what they already know about a topic, or question what they'd like to learn (or something gross to touch!).
2. **Introduce** (5-10 min)
A super short part where you introduce the goals and activities for the day, give instructions for what to do, explain the expectations, explain what the buddies'/parents' roles are, etc. You are not giving a lesson, but instead articulating what the learning goals are and explaining how they will be met.
3. **Activities** (40-45 min)
or activities! Here's the meat of your workshop, and is where students get to be scientists by investigating. Ask them questions to see what they've observed, make a hypothesis about why, design a test to see if they were right, predict what will happen, modify their hypothesis, etc. Scientific method!
How do you know if you're achieving these goals? Consider the following questions:
 - What do the girls know beforehand? How will your workshop push their knowledge?
 - At any moment of the workshop: What are the girls doing? What are the buddies/parents doing? What are the workshop leaders doing?
 - How can you design this experience to be a discovery process for girls?
 - How can you engage every student with different learning styles?
 - How will the girls demonstrate they have met the learning objectives?
4. **Reflection/Debrief** (5 min)
As a group or individually, be sure to help girls articulate what skills/concepts/processes they've learned through this workshop. One good format is: WHAT? SO WHAT? NOW WHAT?

Of course many great workshops don't follow either format, but all good workshops will be student-centred, inquiry-based, fun and informative experiences for girls.