

Effective Groupwork

Groupwork is an essential skill that youth and adults need to learn and practice. Effective groupwork can help engage youth with challenging topics and investigations³ and create an environment where youth can both share their knowledge and learn from their peers. In order to create a cohesive group, start each session with icebreakers or teambuilding activities. Taking time to let youth get to know each other and feel comfortable sharing ideas will set the groundwork for a successful collaboration⁵.

Methods to Create Inclusive Groups:

Assigning Roles

Think of the different roles you have played at school, work, or in a club. How did that affect your performance? Your sense of belonging? Using these roles as a model, create roles with your students that have a real world connection¹. Design meaningful team roles that are intellectually engaging and provide opportunities to contribute to the learning process. Here are two examples:

- When writing a computer program in groups of two, one person may be the driver who touches the computer and the other the navigator, who tells the driver which keys to push.
- When engineering a parachute, roles could include a builder who is physically creating the structure, a troubleshooter who is spotting problems, and a project manager who gather materials and ensures that the project is running on time.

Be sure to switch roles often so that youth are able to participate to the fullest extent possible. Additionally, reiterate that roles are not meant to create a hierarchy⁵. Each person's job is important and necessary. If youth feel that they are not participating equally, take the time to brainstorm ways to adjust the roles so that everyone's talents and strengths are being utilized.

Think Pair Share

The Think Pair Share method is designed to encourage participation and inquiry from all youth in a way they feel comfortable. To start, introduce a question or idea. Youth will then write, draw, or think to themselves. After a few minutes, tell youth to discuss their thoughts with a partner. They may compare and contrast their ideas, or their discussion may spark a new line of inquiry. Finally, each pair will choose a speaker who will relay their discussion to the entire group.

SMART START

Having trouble coming up with roles? Show a role model profile video. Have youth identify the different roles that the role model and her coworkers demonstrate.

Jigsaw

The jigsaw method makes students the expert at one slice of a larger investigation. Have youth divide into groups of 3 – 4, and ask them to learn everything they can about their piece of the problem. For example, if youth are trying to create a dough creature that lights up, you may have one group research series circuits, another parallel circuits, another conductive materials, and a final group that researches nonconductive materials. After researching, groups are then asked to present their findings to the larger group. This method ensures that youth learn information relevant to their investigations¹ while increasing their self-confidence, since they are now the 'experts' in their part of the investigation².