Making your classes available to remote students can extend the reach of your teaching. When considering live virtual instruction it’s important to first understand the perspective of your remote students. You’ll want to adopt a few techniques that will keep your remote students engaged. As a USGS instructor, you have likely taught a number of courses in the classroom. Your teaching skills are just as vital in the virtual classroom. The tips provided in this document will help you connect with your remote students and help them retain new information.

**Communication:** Provide a clear purpose and/or objectives for each instructional module. Success for your virtual students is based on planning and communication. To ensure this occurs, NTC staff has developed several communication products to help manage expectations. Pre-course information such as step for registering in DOI Learn, hardware and software needed and other expectations along with NTC technical support information will be clearly communicated to remote participants by NTC staff.

**Remote Students:** Remote students are as equally important as your students sitting in the classroom. Because they are not visible, it is easy to forget them. To prevent this, NTC Staff will display the names and locations of your virtual students on the NTC whiteboard or flip chart as a reminder.

**Remote Groups:** Most group activities provided in the classroom will work well virtually so you may leave them in your course. If remote students are in groups in a single location make it clear that each will report out by a designated spokesperson.

- If there is only one student at a given location, he/she will still report out but they might not be called on for every activity. You may also elect to call on them last and ask if they have anything to add.

- Depending on how many people are in a remote location you may ask them to work in smaller groups in order for the activity to be manageable.

**Number of Instructors:** At least two instructors are recommended for a virtual class. This enables one instructor to answer remote participant questions via the chat screen, while the other is “up front” teaching.

**PowerPoint Slides:** Use PowerPoint for stimulating visuals and make sure your content is clear. Adult learners likely have clear learning styles:

1. Visual Learners – Show them
2. Audio Learners – Tell them
3. Kinetic Learners – Let them
4. Relevancy – Show (and tell) them how they can use it.
Feedback provided by remote students indicate your PowerPoint slides should have a minimum 24 point, preferably Sans-Serif font. The amount of information on each slide should be limited. Use consistent color and backgrounds. Slides should be limited to no more than 30 or less per hour.

**Exercises:** Participants learn best by working on class activities or exercises after every hour or so of instruction. A minimum of one exercise per lesson/chapter/module is recommended. If there are several remote students from a single location, having them team up to work on exercises is helpful. If a subject matter expert is collocated, enlisting them to help when students get “stuck” is especially helpful.

**Engaging Remote Participants:** Virtual participants appreciate being directly engaged by their instructors. Ask them specific questions by name and solicit comments via chat screen to keep them involved and learning. Repeat all classroom questions out loud to ensure the remote students can hear them.

**Enthusiasm:** How you show your enthusiasm for your subject matter by tone and emphasis is unique to you and is directly experienced by all your participants. It is very easy to “lose” your audience if your voice is not energized and varied.

**Course Pacing:** If your teaching style is normally fast paced, remember that remote students must simultaneously juggle their course materials, slides and hardware/software. Asking remote participant’s questions and then providing time for them to answer offers an opportunity to vary your pace.

**Idiosyncrasies:** We all have them. Throat clearing, monotone, repeating certain phrases or words and even laughter, if constantly repeated are magnified during your presentation. This is especially true for the virtual student. Ask someone you trust to identify any of these habits for you. Your increased awareness will allow you to minimize them.

**Background Noise:** Let your classroom participants know that the NTC microphones are sensitive and can be disruptive to virtual participants.

**Breaks:** Taking planned breaks between class modules is important. Your remote students need to know in advance when the next break will be and how long it will last. It’s especially helpful to announce breaks with an appropriate slide and put the time you will reconvene on the electronic whiteboard.

**Humor:** Humor energizes in the virtual classroom just like in the physical classroom. If your classroom participants are laughing, your virtual participants will probably be energized and laughing as well.

**Scripting:** As we know from watching the nightly news, video presentations can be highly scripted. Teaching does not usually require this. That said, planning what you will say, with speaker’s notes will help you avoid any confusion caused by a disorganized presentation.
**Starting a Class Segment:** As you begin each class module, let your students know how long each will last and what they are expected to learn. Providing learning objectives clearly stated on the first slide of each module is suggested.

**At the End of a Class Module:** Continue to develop rapport with your virtual students by asking questions specific to the content being covered. Provide closure by reviewing what has been covered before you move on.

Live Virtual Instruction Works! Questions? Contact Patty Gonwa pmgonwa@usgs.gov, 303-445-4680 or Ralph Roland raroland@usgs.gov (303) 445-4678.