

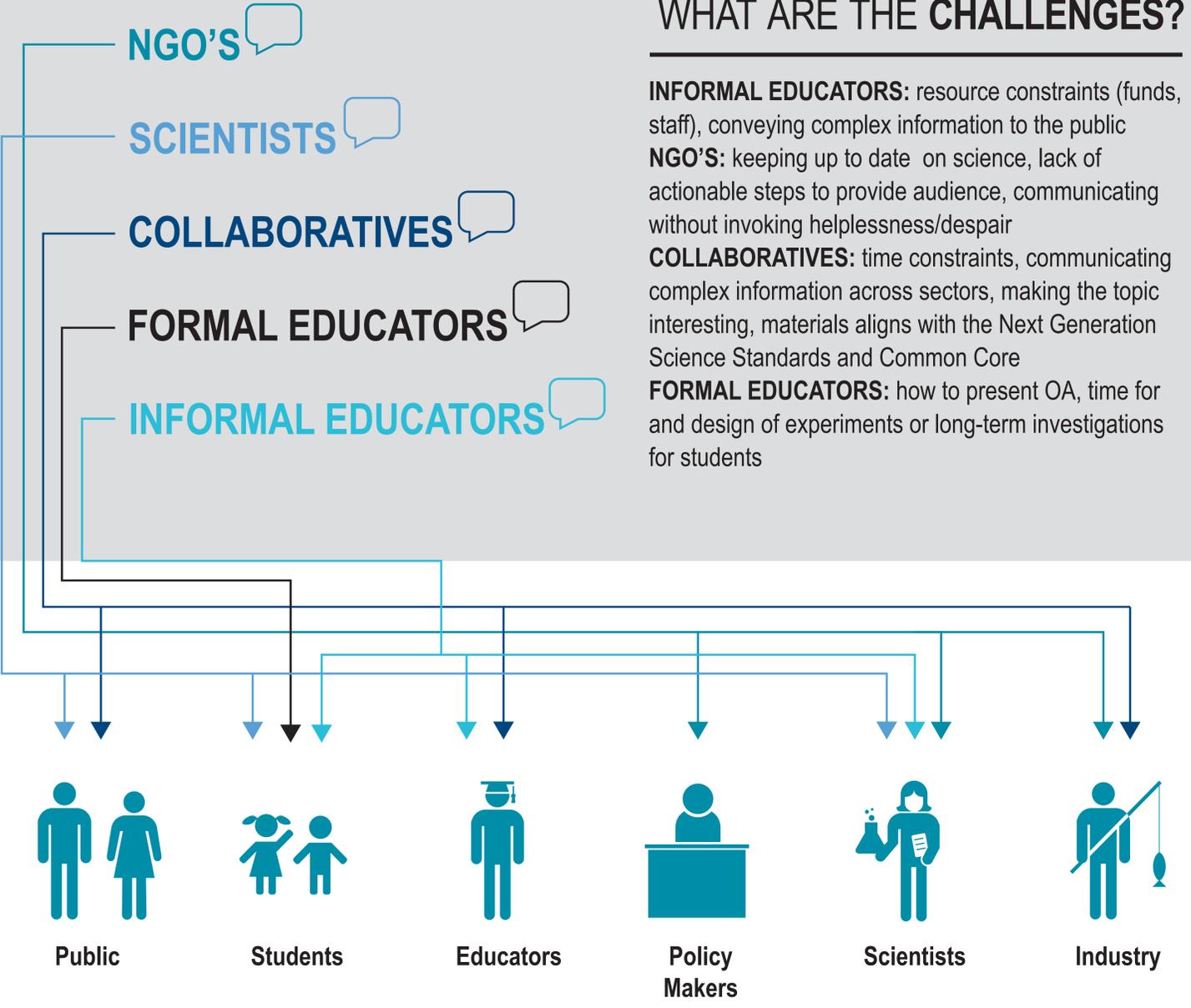
## WHAT IS OCEAN ACIDIFICATION?

The ocean absorbs the excess carbon dioxide CO<sub>2</sub> we emit into the atmosphere when we burn fossil fuels. This changes the chemistry of the ocean and is called "ocean acidification". The change in chemistry reduces the availability of building blocks needed for sea life to create skeletons and shells, and causes "osteoporosis of the sea". Just as humans need calcium to build their bones, ocean animals such as coral and shellfish need calcium carbonate to build strong skeletons and shells. We can help keep marine ecosystems healthy by being part of the solution and reducing our CO<sub>2</sub> emissions on a global scale.

## WHO IS TALKING ABOUT OA?

## WHO ARE THEY TALKING TO?

## HOW AUDIENCES ARE REACHED



## WHAT ARE THE CHALLENGES?

**INFORMAL EDUCATORS:** resource constraints (funds, staff), conveying complex information to the public  
**NGO'S:** keeping up to date on science, lack of actionable steps to provide audience, communicating without invoking helplessness/despair  
**COLLABORATIVES:** time constraints, communicating complex information across sectors, making the topic interesting, materials aligns with the Next Generation Science Standards and Common Core  
**FORMAL EDUCATORS:** how to present OA, time for and design of experiments or long-term investigations for students

## SOLUTIONS:

- Supporting public transportation initiatives
- Increasing the number of people who bike and walk to school and work
- Buying local
- Participate in community supported farms
- Supporting renewable energy initiatives like solar and wind

## WHAT EDUCATION TOOLS ARE NEEDED?

- graphics
- animations
- infographics
- video
- experiments
- data visualizations
- hands-on labs
- field studies
- case studies
- best practices
- searchable database
- standards aligned lessons
- guest speakers

- Website
- Article/ Blog
- Brochure
- Workshop/ Training
- Lesson Plans
- Videos
- Classroom Activities
- Guest Speakers



For more information, visit: <http://oceanacidification.noaa.gov/AreasofFocus/EducationandOutreach.aspx>  
 The information presented here is from a Needs Assessment conducted by NOAA and Public Square Communications.

