1. Sign in
2. Parking validation
3. Restrooms
4. Breaks/Lunch
6. Travel Questions – Fill out W9 if needed
7. Sign non-disclosure form – All members

*Cell phones should only be used during breaks and lunch. If you need to take a call, please go to the break room. Please check text and email only during break due to non-disclosure.*
Thank you!
Introductions

Introduce yourself by telling everyone in the group:

1. Your name
2. Your school/district
3. Your current position
Standards Review - Structure

Arizona State Board of Education
- Decision-making body for Standards

Arizona Department of Education
K-12 Standards Section
- Manages the standards revision process
- Facilitates working group meetings

Science Standards Review and Revision Work Groups
- Fluid groups of diverse grade level content experts responsible for creating working drafts

Public feedback, current research, and professional experience and knowledge informs revisions to drafts.
Science Standard Revision and Implementation Timeline

- **September 2016**
  - Revision process opened with the State Board of Education

- **October – December 2016**
  - ADE collected public feedback on existing standards

- **January 2017 – Spring 2018**
  - ADE convenes working groups of educators, content experts, community members, and parents

- **Anticipated Spring 2018**
  - ADE presents standard to State Board of Education for adoption

- **Transition and Implementation**

  - **Summer 2018**
    - ADE develops support documents
  - **2018-2019 Transition Year**
  - **2019-2020 Transition Year**
  - **2020-2021 Implementation Year**
  - **Spring 2021**
    - Administer science assessment aligned to new standards
A fluid model for selecting working group members is used to encourage statewide representation. Selected applicants may be invited to participate in one or more working group meetings at any point in the process.
Roles/Responsibilities: ADE K-12 Standards Staff

ADE K-12 Standards Members

- Facilitate work group meetings
- Provide meeting goals, agendas, tasks, and instructions
- Provide needed materials
- Organize committee members into vertical, horizontal, and/or content groups, as appropriate.
Roles/Responsibilities: Working Groups

1. Develop the vision for the revised Science Standards

2. Develop drafts of K-12 Science Standards
   – Make decisions about content and structure of grade level standards
   – Apply content knowledge, grade-level expertise, research, and public feedback to inform all decisions

3. Develop drafts of the introduction, glossary, and other appendices, as needed for the K-12 Science Standards
Structure: Working Groups

Use a fluid membership model ("accordion model") to include multiple voices and perspectives throughout the process

- K-12 teachers, coaches, curriculum directors, administrators
- Higher education: science education and science content instructors, professors, and/or researchers
- Content experts from the community
- Parents
Working Group Norms

• Actively engage in all discussions
• Be open-minded
• Have an attitude that fosters collaboration, agreement, and consensus
• Be mindful of timelines and scope of work
• Cell phone/email checks are limited to breaks (non-disclosure)
Questions on Structure
ADE Directive for the Science Standards

• Arizona standards, written for Arizona teachers and students, by Arizona educators and content experts
• Write grade-level standards and not performance objectives
Standards – What a student needs to know, understand, and be able to do by the end of each grade. Standards build across grade levels in a progression of increasing understanding and through a range of cognitive demand levels. Standards are adopted at the state level by the State Board of Education.
Standards, Curriculum, & Instruction

Curriculum – The resources used for teaching and learning the standards. Curricula are adopted at a local level by districts and schools.

Instruction – The methods used by teachers to teach their students. Instructional techniques are employed by individual teachers in response to the needs of the students in their classes to help them progress through the curriculum in order to master the standards.
Standards versus Performance Objectives

Content Standards
Standards are what students need to know, understand, and be able to do by the end of each grade level. Standards build across grade levels in a progression of increasing understanding and through a range of cognitive demand levels.

Performance Objectives
Performance Objectives are incremental steps toward mastery of individual content standards. Performance Objectives are knowledge and skills that a student must demonstrate at each grade level. Performance objectives do not imply a progression of learning and, because they are discrete skills, reach a limited level of cognitive demand.
Work to Date:

• Developed a working vision to guide all future science standards work
• Discussed the idea of organizing the standards around big ideas
Discuss Grade-Band Big Ideas

In grade bands, review big ideas work from last meeting

– Returning members update new members
– Should we continue working on grade-band big ideas?
Discuss Grade-Band Big Ideas

Break into content area groups (Life, Earth, Physical, NOS) with representation from each grade band

- Review vertical progression of big ideas.
- Determine whether we should continue working on grade-band big ideas.
In content area groups (Life, Earth, Physical, NOS) with representation from each grade band

- Review and refine critical content identified in prior meetings
- Refine based on expertise, research, and public feedback on each progression.
THANK YOU