

Colorado Academic Standards Depth of Knowledge

- 1. What is Depth of Knowledge (DOK)?**
- 2. Why are we including Depth of Knowledge in the Standards?**
- 3. Colorado Academic Standards Depth of Knowledge Distribution**

What is Depth of Knowledge (DOK)?

- DOK measures cognitive demand, or complexity, and is assigned using a hierarchy of levels 1 through 4.
- Multiple models exist. In Colorado, we will use a system developed by Norman Webb, commonly used in state alignment efforts.

Depth of Knowledge - Webb Model

To be applied to each evidence outcome in all 13 content areas

Recall:

Requires recall of information, such as a fact, definition, term, or performance of a simple process or procedure.

Level 1

Skills & Concepts:

Requires students to make decisions on how to approach a question or problem.

Level 2

Strategic Thinking:

Requires students to explain, generalize or connect ideas.

Level 3

Extended Thinking:

Requires complex reasoning, planning, developing and thinking over an extended period of time, e.g., developing a hypothesis or performing complex analyses.

Level 4

What is DOK? (continued)

- DOK levels are applicable to all subject areas and at all grade levels.
- Assigning a DOK level involves expanding content and making explicit the knowledge and skills in each Evidence Outcome.
- DOK indicates the level at which a student must learn and apply the thinking processes/skills to successfully demonstrate a particular Evidence Outcome.
- A range of DOK levels will be assigned to each Evidence Outcome in all content areas.

Why are DOK ratings in the “Nature of Science” section of the science standards?

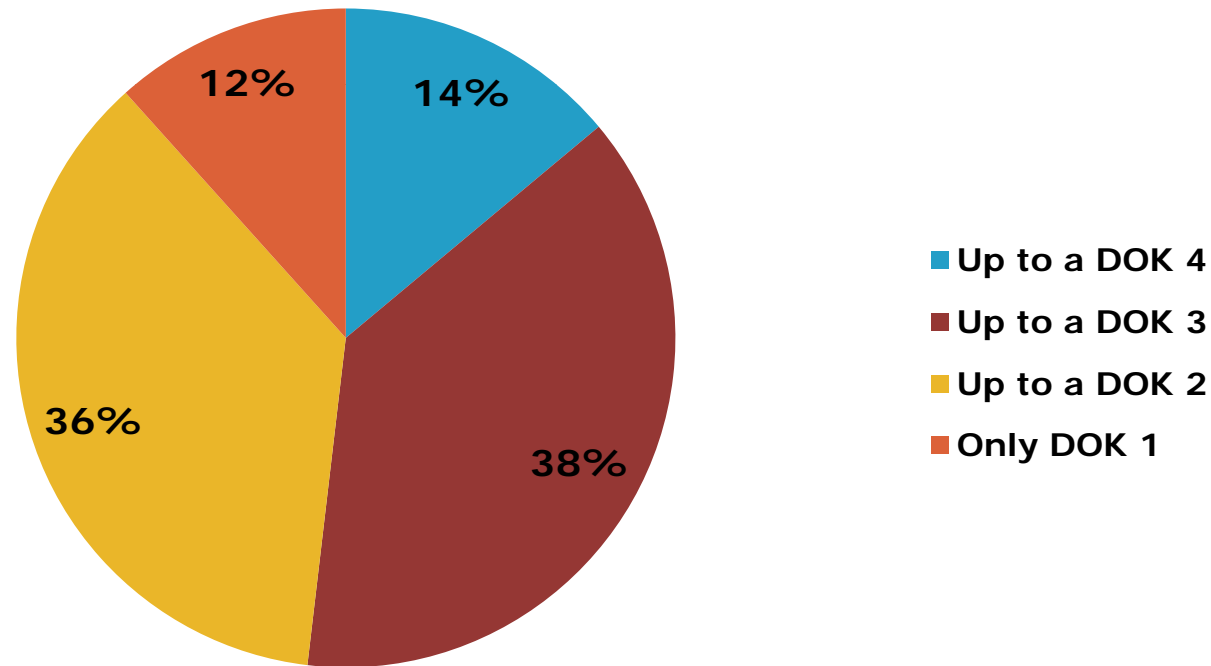
The revised Science standards acknowledge that scientific inquiry, scientific process skills, and science content cannot be taught separately. These components have been integrated into each grade level expectation across all three Science standards. As a result, the Nature of Science component of the revised standards were written to be assessable and include Depth of Knowledge indicators.

Why include DOK in the Standards?

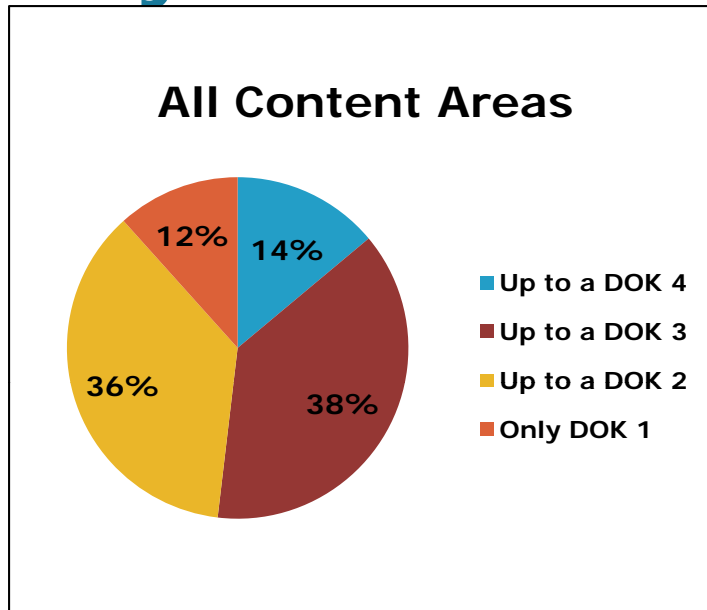
- DOK provides powerful information that inform classroom instruction as to the full intent of the academic standards.
- Teachers will be able to help students achieve mastery by ensuring they can meet the DOK range assigned to the Evidence Outcomes.
- Assigning a range of DOK levels to Standards will inform the development of new assessments. By matching the DOK distribution in the revised standards, we are able to create an aligned standards and assessment system.
- As a requirement of USDOE Peer Review, a DOK distribution provides evidence to support that Colorado state assessments measure higher order thinking skills and challenging content.

Colorado Academic Standards Depth of Knowledge Distribution

All Content Areas

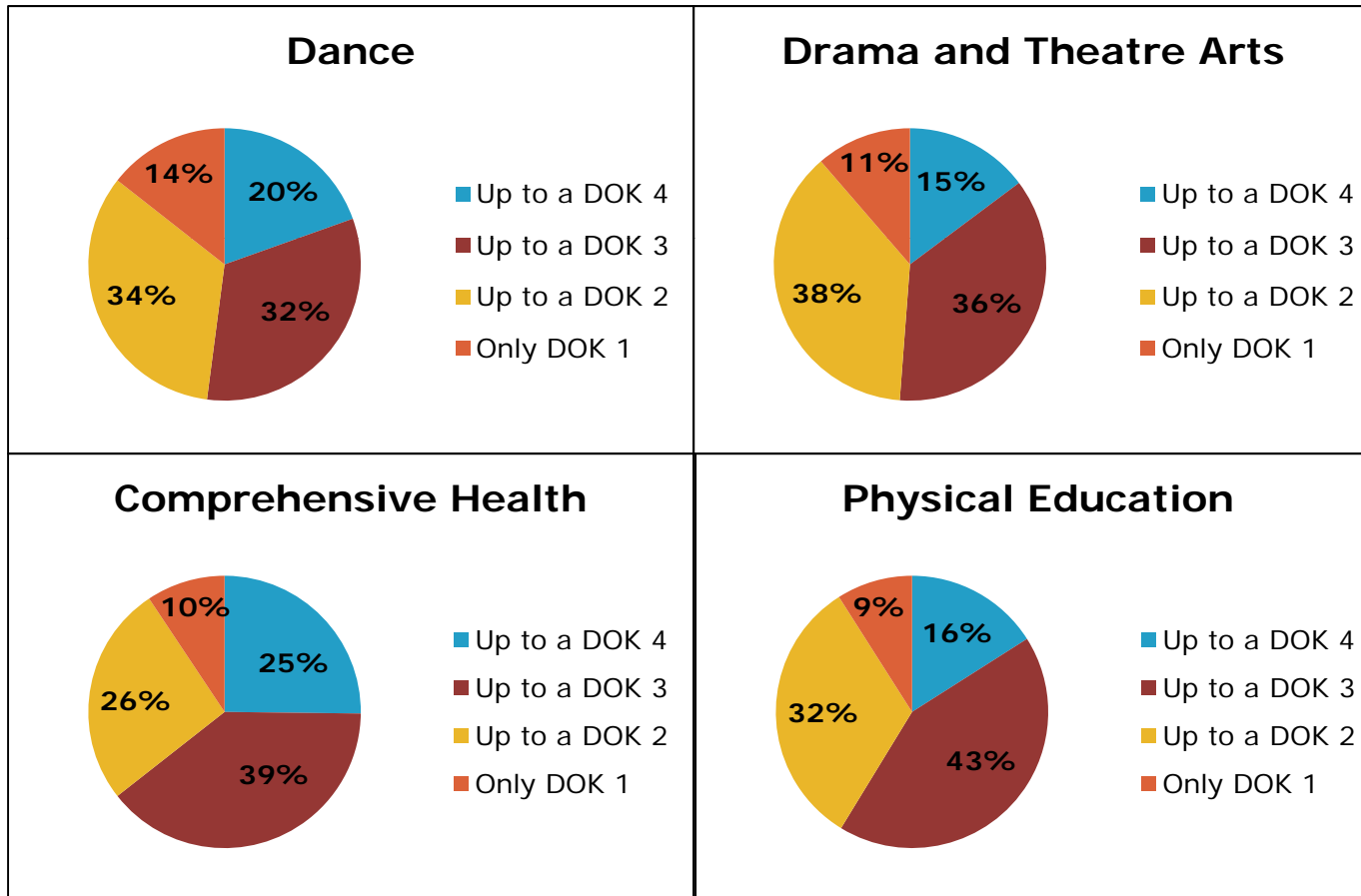


Why is the DOK Distribution significant?

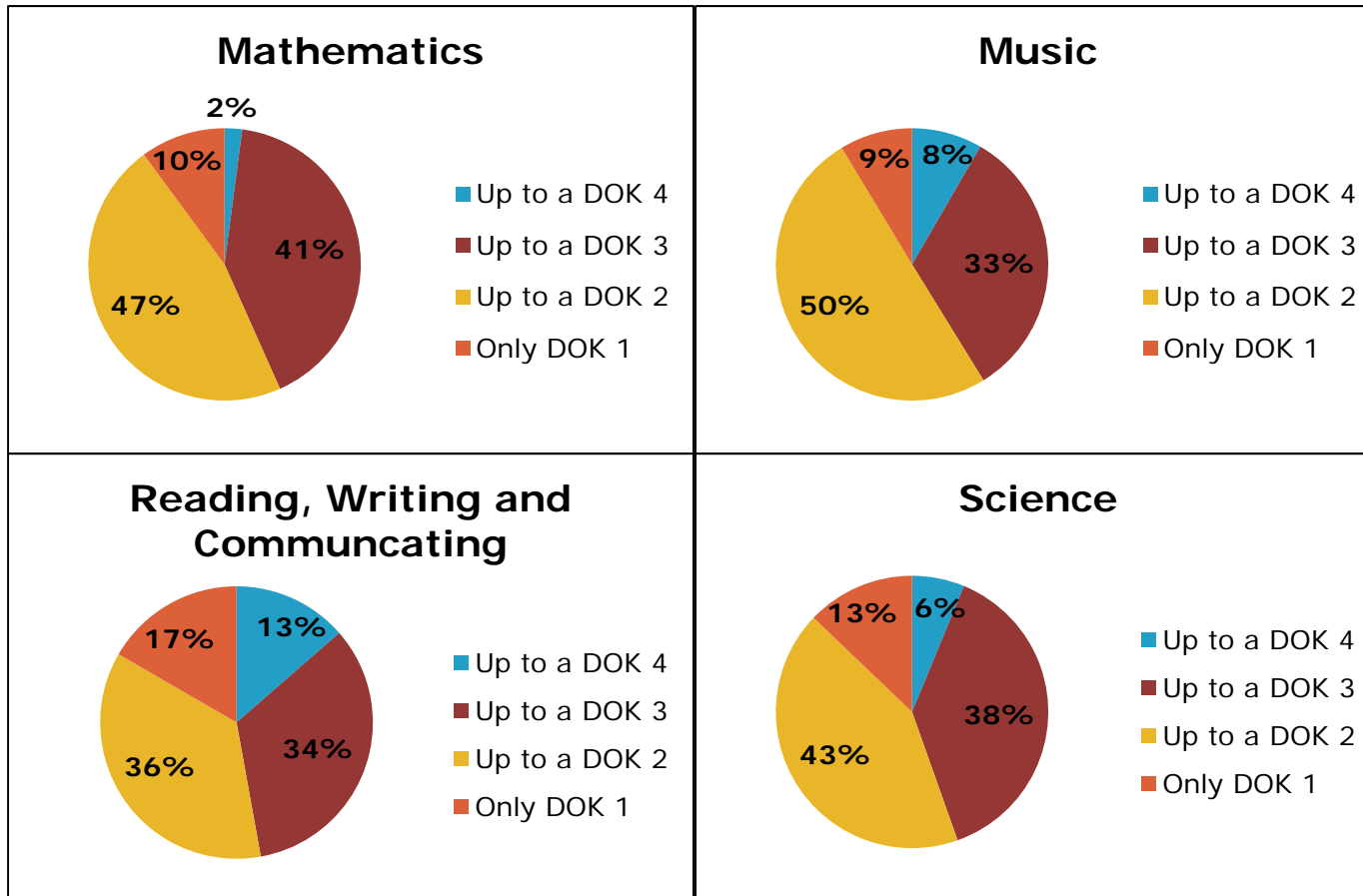


- ❖ Colorado Academic Standards (CAS) require higher rigor and deeper understanding in all content areas
- ❖ 88% of the CAS expect students to demonstrate application of skills and concepts and employ strategic thinking to master grade level expectations
- ❖ An aligned assessment system will correlate with DOK distribution in each content area and at each grade level
- ❖ DOK 4 expectations and some DOK 3 items encourage authentic assessments at the classroom level – i.e., portfolios, performance events, etc.

Colorado Academic Standards Depth of Knowledge Distribution



Colorado Academic Standards Depth of Knowledge Distribution



Colorado Academic Standards Depth of Knowledge Distribution

