**Planning Commentary** **Thinking Organizers and Helpful Hints (Middle Childhood Science)**

***Please note: The purpose of this thinking organizer is to help you gather and organize your thoughts in preparation for writing your planning commentary. You will still need to write your answers in paragraph form in the official edTPA planning commentary template.***

**1. Central Focus (Rubric 1)**

1. Describe the central focus and purpose for the content you will teach in the learning segment.

Sentence starters:

The central focus of this learning segment is …

I am teaching this content because…

b. Given the central focus, describe how the standards and learning objectives within your learning segment address the use of science concepts and the ability to apply scientific practices through inquiry to develop evidence-based explanations of or reasonable predictions about a real-world phenomenon.

Organize your response:

|  |  |  |
| --- | --- | --- |
| List the standard or learning objective | Identify if it is connected to a science concept, a science practice, developing an evidence-based explanation or making a reasonable prediction about a real-world phenomenon. | Explain how these are connected. |
|  |  |  |
|  |  |  |

c. Explain how your plans build on each other to help young adolescents **understand relationships** between scientific concepts, scientific practices, and the phenomenon in the learning segment.

*Clarification: Explain how you will take students from the introduction of the concept to developing an evidence-based explanation or argument about the phenomenon.*

Organize your response:

|  |  |  |  |
| --- | --- | --- | --- |
| Identify the science concept, practice or phenomenon being addressed | Explain how it is addressed in  Lesson 1 | Explain how Lesson 2 builds on Lesson 1 | Explain how Lesson 3 builds on Lesson 2 |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Identify the science concept, practice or phenomenon being addressed | Explain how Lesson 4 builds on Lesson 3 | Explain how Lesson 5 builds on Lesson 4 |  |
|  |  |  |  |
|  |  |  |  |

d. Explain how you will help young adolescents make interdisciplinary or integrative connections between the central focus of the learning segment and other subject areas.

|  |  |  |
| --- | --- | --- |
| Central Focus | What other subject area do you want your students to connect the central focus to? | How will you help young adolescents make this connection? |
|  |  |  |

**2. Knowledge of Students to Inform Teaching (Rubrics 2 and 3)**

For each of the prompts below (2a–c), describe what you know about **your students** with **respect to the central focus** of the learning segment.

Consider the variety of young adolescent learners in your class who may require different strategies/support (e.g., students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students).

a**.** Prior academic learning, prerequisite skills, and understanding of the nature of science related to the central focus**— Cite evidence of what young adolescents know, what they can do, and what are they are still learning to do.**

Organize your response:

|  |  |  |  |
| --- | --- | --- | --- |
| Students | Related content already learned | Related skills students already have | What the students are learning to do related to the learning segment |
| Class as a whole |  |  |  |
| Students with IEPs |  |  |  |
| Students with 504 plans |  |  |  |
| Other groups of learners |  |  |  |

b. Personal/cultural/community assets related to the central focus—**What do you know about your students’ everyday experiences, cultural backgrounds and practices, and interests?**

Organize your response:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Students | Students’ everyday experiences related to the learning segment | Students cultural backgrounds related to the learning segment | Students’ practices related to the learning segment | Students’ interests related to the learning segment |
| Class as a whole |  |  |  |  |
| Students with IEPs |  |  |  |  |
| Students with 504 plans |  |  |  |  |
| Other groups of learners |  |  |  |  |

*Notes: Stay positive – discuss your students’ assets*

*Keep the learning segment in mind – only discuss student assets related to the learning segment*

c.Young adolescent developmental assets related to the central focus—**What do you know about your students’ cognitive, physical, and social and emotional development?**

|  |  |  |  |
| --- | --- | --- | --- |
| Students | Students’ cognitive development related to the central focus | Students’ physical development related to the central focus | Students’ social/emotional development related to the central focus |
| Class as a whole |  |  |  |
| Students with IEPs |  |  |  |
| Students with 504 plans |  |  |  |
| Other groups of learners |  |  |  |

**3. Supporting Students’ Science Learning (Rubrics 2 and 3)**

1. Justify how your understanding of your students’ prior academic learning (from prompt 2a above) guided your choice or adaptation of learning tasks and materials. Be explicit about the connections between the learning tasks and students’ prior academic learning and research/theory.

Organize your answer:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Chosen learning task or material (or adaptation of either) | Associated prior student learning | Why did you make this choice? | What research supports this choice? | How does the research support this choice? |
|  |  |  |  |  |
|  |  |  |  |  |

1. Justify how your understanding of your students’ personal, cultural, community, and developmental assets (from prompts 2b–c above) guided your choice or adaptation of learning tasks and materials. Be explicit about the connections between the learning tasks and students’ assets **AND** research and/or theory.

Organize your answer:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Chosen learning task or material | Associated student asset | Why did you make this choice? | What research supports this choice? | How does the research support this choice? |
|  |  |  |  |  |
|  |  |  |  |  |

1. Describe and justify why your instructional strategies and planned supports are appropriate for **the whole class, individuals, and groups of young adolescents with specific learning needs.**

Consider young adolescents with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students needing greater support or challenge.

Organize your answer:

|  |  |  |
| --- | --- | --- |
| Instructional strategy or planned support | How is this tied to the learning objective? | Explain why is this appropriate for the whole class, a particular group of students or specific individual students. |
|  |  |  |
|  |  |  |
|  |  |  |

d. Describe common preconceptions (based on prior academic learning and experiences) within your central focus and how you will identify and address them.

Organize your answer:

|  |  |  |
| --- | --- | --- |
| Possible student preconception | How will you identify if students have this preconception? | How will you address it during instruction? |
|  |  |  |
|  |  |  |

**4. Supporting Science Development Through Language (Rubric 4)**

**a. Language Function.** Using information about your student’s language assets and needs, identify **one** language function, from the list below, essential for students to develop understanding of science concepts, the phenomenon, and the application of scientific practices through inquiry within your central focus.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Analyze | Explain | Interpret | Justify with evidence | Predict |

*Sentence starter: “The language function essential for student learning within my central focus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”*

b. Identify a key learning task from your plans that provides young adolescents with opportunities to practice using the language function. Identify the lesson in which the learning task occurs. (Give lesson day/number.)

*Sentence starter: “The key learning task that gives students the opportunity to practice using the language function is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This task occurs on day \_\_\_\_\_\_\_\_\_\_ in Lesson \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”*

**c. Additional Language Demands**. Given the language function and learning task identified above, describe the following associated language demands (written or oral) young adolescents need to understand and/or use:

- Vocabulary and/or symbols

**- Plus** at least one of the following:

- Syntax

- Discourse

Consider the range of young adolescents’ understandings of the language function and other language demands—What do students already know, what are they struggling with, and/or what is new to them?

Organizing your response:

|  |  |  |  |
| --- | --- | --- | --- |
| Language demand | What do students already know? | What are they struggling with? | What is new to them? |
| Vocabulary |  |  |  |
| Symbols |  |  |  |
| Syntax |  |  |  |
| Discourse |  |  |  |

**d. Language Supports.** Refer to your lesson plans and instructional materials as needed in your response to the prompts.

Identify and describe the planned instructional supports (during and/or prior to the learning task) to help students understand, develop, and use the identified language demands (function, vocabulary and/or symbols, syntax, or discourse).

Organizing your response:

|  |  |  |
| --- | --- | --- |
| Language demand | Language support planned | How does this language support help students develop or use this language demand? |
| Language function |  |  |
| Vocabulary and/or symbols |  |  |
| Syntax and/or discourse |  |  |

**5. Monitoring Student Learning (Rubric 5)**

In response to the prompts below, refer to the assessments you will submit as part of the materials for Task 1.

1. Describe how your planned formal and informal assessments will provide direct evidence of young adolescents’ understanding of science concepts, the real-world phenomenon, **AND** the application of scientific practices through inquiry **throughout** the learning segment.

Organize your response:

|  |  |  |
| --- | --- | --- |
| Area of Targeted Student Learning | Description of assessments designed to monitor the targeted student learning. | Explain how these assessments will provide evidence of student mastery of this area of targeted student learning? |
| Understanding of science concepts |  |  |
| Understanding of real-world phenomenon |  |  |
| Application of scientific practices through inquiry |  |  |

b. Explain how the design or adaptation of your planned assessments allows young adolescents with specific needs to demonstrate their learning.

Consider all students, including students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students.

Organize your response:

|  |  |  |
| --- | --- | --- |
| Description of assessment or assessment adaptations | The student(s) for whom the assessment was designed or adapted | How does this assessment allow this student(s) to demonstrate his/her learning? |
|  |  |  |
|  |  |  |
|  |  |  |

**Instruction Commentary** **Thinking Organizers and Helpful Hints (Middle Childhood Science)**

***Please note: The purpose of this thinking organizer is to help you gather and organize your thoughts in preparation for writing your instruction commentary. You will still need to write your answers in paragraph form in the official edTPA instruction commentary template.***

1. Which lesson or lessons are shown in the video clips? Identify the lesson(s) by lesson plan number.

Sentence starters:

“The lesson shown in the clips is Lesson #\_\_\_\_\_\_\_”

OR

“The lesson shown in Clip 1 is Lesson \_\_\_\_\_\_\_ and the lesson shown in Clip 2 is Lesson \_\_\_\_\_\_\_\_.”

**2. Promoting a Positive Learning Environment (Rubric 6)**

a. How did you demonstrate mutual respect for, rapport with, and responsiveness to young adolescents with varied needs (academic and developmental) and backgrounds, and challenge young adolescents to engage in learning?

Organize your answer:

|  |  |  |
| --- | --- | --- |
| Characteristic of Positive Learning Environment | Video segment(s) with time stamps that demonstrates this characteristic | How does this clip demonstrate this characteristic? |
| Mutual respect for students |  |  |
| Rapport with students |  |  |
| Responsiveness to students’ needs |  |  |
| Challenging students to engage in learning |  |  |

b. If relevant, describe what you did to ensure safety during the inquiry seen in the video clips.

Organize your answer:

|  |  |  |
| --- | --- | --- |
| Description of Safety Component | Video segment(s) with time stamps that shows this safety component | How does this clip demonstrate your attention to safety? |
|  |  |  |

OR

“Safety precautions were not needed in the video clip lesson(s) because…”

**3. Engaging Students in Learning (Rubric 7)**

1. What was the process by which young adolescents selected or collected evidence and/or data to support evidence-based explanations of or predictions about the real-world phenomenon being investigated?

The students collected evidence by…

OR

The students collected data by…

b. Explain how you engaged young adolescents during a scientific inquiry in

using evidence and/or data and science concepts to construct **explanations of** or **predictions about a**

**real-world phenomenon** and

critiquing explanations **OR** predictions of peers.

Organize your answer:

|  |  |  |
| --- | --- | --- |
| Student action | Video clip with time stamps that shows this action | How is this action seen in the video? |
| Students are using evidence, data or science concepts to construct an explanation or prediction about a real-world phenomenon |  |  |
| Students explain how the data or science concepts support their claims. |  |  |
| Students critiquing the explanations or predictions of peers. |  |  |

c. Describe how your instruction linked young adolescents’ prior academic learning and personal, cultural, community, or developmental assets with new learning.

|  |  |  |
| --- | --- | --- |
| Instructional connections between student characteristics and new learning | Video clip with time stamps that shows this connection | How is this connection seen in the video? |
| Students’ prior academic learning |  |  |
| Students’ personal assets |  |  |
| Students’ cultural assets |  |  |
| Students’ community assets |  |  |
| Students’ developmental assets |  |  |

**4. Deepening Student Learning during Instruction**

a. Explain how you **elicited and built on student responses** to promote thinking and develop understandings of science concepts, scientific practices and inquiry, **and/or** the phenomenon being investigated**. (Rubric 8)**

|  |  |  |
| --- | --- | --- |
| Evidence of eliciting responses from students related to… | Video clip (including time stamps) | Describe how you elicited responses and deepened student thinking in this clip |
| Understanding science concepts |  |  |
| Science practices and inquiry |  |  |
| The phenomenon being investigated |  |  |

b. Explain how your instruction supported young adolescents in using science concepts, quality of evidence and/or data (e.g., accurate measurement or recording of data, inconsistent results), and scientific practices while they are analyzing evidence and/or data during a scientific inquiry. **(Rubric 9)**

|  |  |  |
| --- | --- | --- |
| Science Pedagogy | Video clip (including time stamps) | Describe how this clip provides evidence of this science pedagogy |
| Students are presenting or recording evidence and/or data |  |  |
| Students are using tables, maps, diagrams, or other graphical displays |  |  |
| Candidate is facilitating a data analysis discussion |  |  |
| Students demonstrate the ability to find patterns to indicate relationships |  |  |

**5. Analyzing Teaching (Rubric 10)**

a. What changes would you make to your instruction—for the whole class and/or for students who need greater support or challenge—to better support young adolescent learning of the central focus (e.g., missed opportunities)?

Consider the variety of young adolescent learners in your class who may require different strategies/support (such as students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students).

Organize your response:

|  |  |  |
| --- | --- | --- |
| Learning need seen in video | Video segment (Including video # and time stamps) | Related proposed change in teaching practice |
|  |  |  |
|  |  |  |

1. Why do you think these changes would improve young adolescent learning? Support your explanation with evidence of young adolescent learning **and** principles from theory and/or research, including young adolescent development.

Organize your response:

|  |  |  |  |
| --- | --- | --- | --- |
| Proposed change in teaching practice | How would this change assist students with achieving the learning objective? | What research is this change based on? | How does this research support your proposed change? |
|  |  |  |  |
|  |  |  |  |

**Assessment Commentary** **Thinking Organizers and Helpful Hints (Middle Childhood Science)**

***Please note: The purpose of this thinking organizer is to help you gather and organize your thoughts in preparation for writing your assessment commentary. You will still need to write your answers in paragraph form in the official edTPA assessment commentary template. The exception to this is your response to 1b.***

1. **Analyzing Student Learning (Rubric 11)**
2. Identify the specific learning objectives measured by the assessment you chose for analysis**.**

Organize your answer:

|  |  |
| --- | --- |
| Learning Objective | Explain how this is measured in the assessment |
|  |  |
|  |  |

b. Provide a graphic (table or chart) or narrative that summarizes student learning for your whole class. Be sure to summarize student learning for all evaluation criteria submitted in Assessment Task 3, Part D.

*Create a table that shows the student learning/performance by question or activity aligned to objective.*

c. Use evidence found in the **3 student work samples and the whole class summary** to analyze the patterns of learning **for the whole class** and differences for groups or individual learners relative to

* conceptual understanding
* use of scientific practices during inquiry, **AND**
* evidence-based argument about a scientific phenomenon

Consider what young adolescents understand and do well, and where they continue to struggle (e.g., common errors, confusions, need for greater challenge).

Organize your answer:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pattern of student learning observed  (What are they doing well or what are they struggling with?) | Is the pattern relative to conceptual understanding, use of scientific practices, or creating evidence-based arguments? | Students showing this pattern | Evidence from whole class summary | Evidence from student work samples |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Feedback to Guide Further Learning**

b. Explain how feedback provided to the 3 focus students addresses their individual strengths and needs relative to the learning objectives measured**. (Rubric 12)**

*Hints: Be sure to provide feedback to students on both their strengths and their errors.*

*Be sure to provide equal feedback to all student work samples.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Focus student | Description of feedback provided (identify question, page, etc.) | Associated learning objective | How does the feedback address the students’ strengths? | How does the feedback address the students’ needs? |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

**c.** Describe how you will support each focus student to understand and use this feedback to further their learning related to learning objectives, either within the learning segment or at a later time (**Rubric 13**)

|  |  |  |
| --- | --- | --- |
| Focus student | How student will understand and use the feedback for further learning to their current work? | How you will support the student in understanding and using the feedback? |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

**3. Evidence of Language Understanding and Use (Rubric 14)**

Explain and provide concrete examples for the extent to which your students were able to use or struggled to use the

selected language function,

vocabulary and/or symbols, AND

syntax or discourse

to develop content understandings.

Organize your response:

|  |  |  |
| --- | --- | --- |
| Language demand | Evidence of use or struggle (be specific) | How does this evidence show the students using or struggling to use the language demand to develop their content understanding? |
| Selected language function (write it in) |  |  |
| Vocabulary |  |  |
| Symbols |  |  |
| Syntax |  |  |
| Discourse |  |  |

**4. Using Assessment to Inform Instruction (Rubric 15)**

**a.** Based on your analysis of young adolescent learning presented in prompts 1c–d, describe next steps for instruction

* for the whole class
* for the 3 focus students and other individuals/groups with specific needs

Consider the variety of young adolescent learners in your class who may require different strategies/support (e.g., students with IEPs, English language learners, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students needing greater support or challenge)

|  |  |  |
| --- | --- | --- |
| Students | Learning Need Seen On Video | Next steps for instruction |
| Whole class |  |  |
| Focus student 1 |  |  |
| Focus student 2 |  |  |
| Focus student 3 |  |  |
| Individuals with specific needs |  |  |
| Groups with specific needs |  |  |

1. Explain how these next steps follow from your analysis of young adolescent learning. Support your explanation with principles from research and/or theory as well as young adolescent development.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Next step for instruction | What learning need is this in response to? | Why did you choose this as your next step for instruction? | What research supports this instructional choice? | How does this research support this instructional choice? |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |