IPIR – Instructional Planning, Implementation, and Reflection *(with edTPA Preparation)*

STOP: Your school day lesson must fit your host teacher's selected grade, topic, subject level, topic calendar, and format. Make sure that you have discussed everything with your host teacher beforehand. If your host teacher does not approve of your lesson, you cannot teach it. The host teacher will contact Bradshaw, and you will earn the resulting zero grade.

The Curriculum Library has great resources. Some students look for lesson plans in the Curriculum Library or the Education Research Guide http://libguides.liberty.edu/content.php?pid=544015&sid=4475338.

See the Virginia Department of Education website http://www.doe.virginia.gov/testing/index.shtml -- Click on the subjects on the right of this website.

First, check the permissions and usage policies for your resources. Some items are protected by copyright. Scroll down to the bottom of the webpage, and look for information on Copyright, or Privacy, or Terms of Use. If you are allowed to use it, then do so and reference it. If you have to get permission first, then do so. Remember-you will need to reference everything that you use for this lesson plan.

Always cite and reference everything that you use, including images. Here are some media databases that can help you with media and images.

http://www.liberty.edu/library/media-databases/

PART A: CONTEXT FOR LEARNING
ABOUT THE SCHOOL WHERE YOU ARE TEACHING
1. In what type of school do you teach? (*Fill in the checkbox next to the appropriate description; if "other" applies, provide a brief description.)*
☐ Elementary school ☒ Middle school ☐ High School ☐ Other (please describe): Click or tap here to enter text.
2. Where is the school where you are teaching located? *(Fill in the checkbox next to the appropriate description .)*
☐ City ☐ Suburb ☐ Town ☒ Rural
3 List any special features of your school or classroom setting (*e.g., charter, co-teaching, themed magnet, intervention or other leveled small group instruction, classroom aide, bilingual, team taught with a special education teacher*) **that will affect your teaching in this learning segment.**
N/A

4. Describe any district, school, or cooperating teacher requirements or expectations that might affect your planning or delivery of instruction, such as required curricula, pacing plan, use of specific instructional strategies, or standardized tests.

N/A

ABOUT THE CLASS FEATURED IN THIS LEARNING SEGMENT

5. Is there any ability grouping or tracking in the class? If so, please describe how it affects your class.

Students are divided into two groups by ability: Math 6 and Advanced Math 6

6. List other resources *(e.g., electronic whiteboard, classroom library or other text sets, online professional resources*) **you use for instruction in this class.**

SMART Board, SMART Exchange

ABOUT THE STUDENTS IN THE CLASS FEATURED IN THIS LEARNING SEGMENT

7. Grade Level(s):

6th Grade

8. Number of:

Students (total)	26	**Male**	11	**Female**	15

9. Supporting students with special needs *(this includes an explicit and specific description of how you will implement accommodations/modifications required by IEPs/504 Plans and other ways that you will address diverse student needs.*

IEP (list number of IEPs and primary disabilities)	5 IEPs: 2 diabetics, 1 narcoleptic, 2 LD

IEP – description for implementing accommodations/modifications	Students will be allowed to use the tiles throughout the lesson and not just for the parts where they are required (DI, GP).
504 Plan (list number of 504 Plans and primary disabilities)	N/A
504 Plan – description for implementing accommodations/modifications	N/A
ELL (list number of ELL students)	N/A
ELL – description for implementing accommodations/modifications	N/A
Other	5 students with documented ADHD
Other – description for implementing accommodations/modifications	Students will be using manipulatives throughout the lesson which engages kinesthetic learners and students with ADHD.

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PART B: PLANNING			
DAILY LESSON PLAN TEMPLATE			
PRELIMINARY INFORMATION			
Created by	Isaiah Quigley	**Date Developed**:	04/05/18
Subject/Topic	Mathematics	**Date of Lesson**:	04/12/18
Grade Level	6th Grade	**Learning Segment Theme**	Numbers and Number Sense: Perfect Squares
Number of Students	26		
Where in the learning segment does this lesson occur?		**Structure(s) or grouping for the lesson** *(Select all that apply)*	
☐ Beginning ☐ Middle ☒ End		☒ Whole class ☐ Small Group ☐ 1:1 ☐ Other (specify): Click or tap here to enter text.	
Any other information that you know about the context, including diversity among the students:			
Predominantly Caucasian, 3 AA, 1 asian Predominantly middle SES			
Resources and materials required for the lesson *(e.g. textbook(s), module, equipment, technology, art materials)*:			
SMART Board, SMART Board lesson, Square Tile manipulatives, Perfect Squares notes, GP worksheet, IP worksheet			
CONSIDER THE FOLLOWING QUESTION FOR THE NEXT SECTION OF THIS FORM. **1. What are your goals for student learning and why are they appropriate for these students at this time?**			
BIG IDEA OR CONCEPT BEING TAUGHT — CENTRAL FOCUS			
The central focus of the lesson is perfect squares. I want students to be able to explain why a number is or is not a perfect square.			

RATIONALE/CONTEXT FOR LEARNING — JUSTIFICATION FOR YOUR PLANS

Why this lesson at this time, for this group of learners? How does it connect to previous learning or succeeding lessons?

According to their teacher, the students have difficulty with the concept of perfect squares. With the SOL tests quickly approaching, I wanted to give them the support they need to succeed by reteaching perfect squares to them. This lesson connects to material they are currently learning. Currently, the students are learning about perimeter and area. I hope to be able to use area, a concept they understand, to help teach the concept of perfect squares.

PRIOR KNOWLEDGE AND CONCEPTIONS

What <u>prior knowledge</u> must students already know to be successful with this lesson?	Students must know what exponents are, what it means to square a number
What <u>prior skills</u> must students already know to be successful with this lesson?	Students must be able to square integers, multiply integers
What <u>prior academic</u> language must students already know to be successful with this lesson?	Students need to know the terms exponent, square

CONTENT STANDARDS

Note: Include the identifying number <u>and</u> the full text of the standards. Yes, you will see that the national standards are more "broad." The state standards tend to be a little more specific. Try to match the national standard and state standard as best as you can.

<u>Some National Standards</u>

Common Core Standards:
http://www.corestandards.org/

National Health Education Standards
http://www.cdc.gov/healthyschools/sher/standards/index.htm

<u>Some State Standards</u>

Virginia Standards:
http://www.doe.virginia.gov/testing/sol/standards_docs/index.shtml

Other State Standards:
http://www.corestandards.org/standards-in-your-state/

State Standards	VA SOL 6.4 The student will recognize and represent patterns with whole number exponents and perfect squares. CCSS.MATH.CONTENT.8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
National Standards	NCTM Standards • Develop and analyze algorithms for computing with fractions, decimals, and integers and develop fluency in their use. • Use geometric models to represent and explain numerical and algebraic relationships. • Select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision.

LEARNING OBJECTIVE(S) *(These must be behavioral and measurable.)*

Note: These are statements of what students will know, understand, and be able to do at the end of the lesson *(consider all three domains)*. Include condition, performance, criterion in the CPC format.

Given a number which is perfect square, students will be able to draw a square representing that number getting 4/5 correct.
Given an integer or diagram of a shape, students will be able to explain in writing why the shape is or is not a perfect square getting 5/5 correct.

ACADEMIC LANGUAGE DEMANDS

Language Demand(s)	The students will need to know what an exponent is, what a square is, what an integer/whole number is and what it means to square two numbers.
Language Support(s)	Students who do not meet these demands will be caught up during the diagnostic assessment (see below).
Essential Vocabulary	Exponent Square Perfect Square Whole Number/Integer

LU SOE SPECIFIC LESSON REQUIREMENTS

Character Education Note: How will you incorporate character education in this lesson?	This is a review lesson. Students have seen this material before and, according to their teacher, they had difficulty with it. This lesson can be used to teach the value of persevering and not giving up.
TCA Alignment Note: Go to the TCA sction of the UGuide. Pick three Teaching Competencies, and explain how your lesson meets those competencies. Pick one Content Competency, and explain how your lesson meets that competency.	Teaching Standard 1: I will display Professional Knowledge through my knowledge of perfect squares and my ability to connect the subject to prior and future content. Teaching Standard 2: I will display Instructional Planning through my development of this lesson. I am using my knowledge of the students to guide my planning of this lesson and will make sure I am fully prepared when I teach. Teaching Standard 3: I will display Instructional Delivery by making sure my lesson is engaging, differentiated, and effective. I will be using technology to enhance student learning. Content Standard 1A: I will display my Knowledge of Number and Operation as part of this lesson as the lesson is about perfect squares, which is a number/operation topic.
CONSIDER THE FOLLOWING QUESTION FOR THE NEXT SECTION OF THIS FORM. **2. How will you know and document students' progress towards meeting your learning objectives?**	
EVIDENCE AND ASSESSMENT OF STUDENT LEARNING **How will you know whether students are meeting your learning objectives? What tools will you use to measure their progress? How will you provide feedback to promote student learning?**	
Diagnostic/Pre-assessment(s)	This will occur during the set. Students will be asked to list observations about two shapes. One shape is a perfect square, 9 square units in size. One is not a perfect square, 11 square units in size. Such observations may include that the shape is a square, that it is made up of [9 or 11] square units, for the perfect square, that it is 3 units tall and 3 wide, etc. If students use the term *perfect square*, I will know they have been exposed to this topic in the past and have some understanding of it. If students refer to the area of the squares, this shows me they understand a prior concept which may be used to teach this concept.
Formative Assessments/Feedback to Learners	Students will be assessed formatively throughout the lesson. I will check in throughout the lesson with them. They will also be following along as I teach, so I can check on them during the lesson.

Summative Assessments	Summative assessment will be the independent practice.
EXPECTATIONS FOR STUDENT LEARNING — STANDARDS AND CRITERIA **Describe in detail the following levels of student performance and what student's work will look like in each circumstance. How will you communicate your expectations to students? Provide any rubrics you will use.**	
Exceeds Expectations	Students will exceed expectations by achieving the objective and obtaining 5/5 on any part of the objective.
Meets Expectations	Students will meet expectations by achieving the objective and obtaining 4/5 on each part of the objective.
Below Expectations	Students will be below expectations by getting less than 4/5 correct on each part of the objective.
CONSIDER THE FOLLOWING QUESTION FOR THE NEXT SECTION OF THIS FORM. **3. How will you support students to meet your goals? Describe EXPLICITLY what you will do!**	
BEGINNING: LAUNCH/HOOK/ANTICIPATORY SET **How will you get the lesson started? What questions, texts, inquiry, modeling, and/or other techniques will you use to engage students?**	
At the beginning of the SMART Board lesson, I will have slides with shapes on them. The first shape will be a perfect square of the size 9 square-units [slide 2]. I will ask students to make observations about it. The goal of this exercise is to have students discover the nature of perfect squares while also showing me what prior knowledge they have. The same will be done with an 11 square unit shape which is not a perfect square. [slide 3]	
MIDDLE: INSTRUCTIONAL STRATEGIES TO FACILITATE STUDENT LEARNING **For example: How will you engage students with ideas/texts to develop understandings? What questions will you ask? How will you promote question generation/discussion? What activities will you use to engage students in learning—for individuals, small groups, or the whole class? How will you incorporate technology? How will you address the academic language demands? Detail your plan.** *Note: For math lesson plans, please write or attach every task/problem students will solve during the lesson—with the correct answers.*	

Instruction/Modeling	The rest of the SMART Board will be the Direct Instruction. [slides 4-7] define key terms. I will go through these slides and define the essential vocabulary. Students will fill in notes to place in their notebooks. [slides 8-30] On these slides, I will show the students what makes certain numbers perfect squares. I will have students come up and assist by building squares using the square units. Students will follow along using colored tile manipulatives (510.78 Cui). An example from slides 8-30 would be this: **Read/Ask:** $2^2 = 2 * 2 =$ what? [Answer: 4]. **Say:** Good, so we need four squares. Let's put these together to make a perfect square. **Ask:** What would happen if I had five squares? Could I make a perfect square with five squares? [Answer: No]. No, I couldn't. So five is not a perfect square. Throughout the lesson, I will write the perfect squares {1, 4, 9, …, 100} on the board diagonally. I will use this to point out that the perfect squares are the numbers on the diagonal of multiplication table.
Guided Practice	Students will explore perfect squares in groups using the colored tiles. Students will build the lowest possible square with their tiles and answer questions based on their observations. I will demonstrate the first and students will work in groups to complete the rest.
Independent Practice	Students will be given practice problems. Five of these problems will require students to draw a square made up of square units representing a number sentence. For example, given $3^2 = 9$, students will be able to draw a square made up of nine square units. Five of these problems will require students to identify whether or not a square or number sentence is a perfect square and explain why or why not. For example, 9 is a perfect square because one can arrange 9 blocks into the shape of a square without any left over. 8 is not a perfect square because a perfect square cannot be created using 8 blocks. Students will have the colored blocks from earlier to help them if needed.
END: CLOSURE **How will you end the lesson in a way that promotes student learning and retention?**	

To close, I will relate perfect squares to area, a concept which they will have just finished studying and have a firm grasp on.

DIFFERENTIATION/EXTENSION

How will you provide successful access to the key concepts by all the students at their ability levels?

Note: Look through all of these for information.

- The textbook is a great resource.
- Search in the Virginia Department of Education link: http://www.doe.virginia.gov/special_ed/disabilities/ (Look to the right for information on various disabilities.)
- See the Education Research Guide and look up information: http://libguides.liberty.edu/content.php?pid=544015&sid=4475334

Supporting students with special needs *(This includes an explicit and specific description of how you will implement accommodations/modifications required by IEPs/504 Plans and other ways that you will address diverse student needs.)*	Some support has been addressed in previous sections. Students are provided with manipulatives which they will be allowed to use throughout the lesson. My lesson provides support for multiple intelligences as well, including visual, verbal, kinesthetic, intrapersonal, and interpersonal intelligences. I will also be staying during 7th period as part of my Service Learning Project and can support during this time.
Challenging above-average students (STOP: *All children must make progress in your class. It is your responsibility as an educator. Here is a common error: advanced students cannot just serve as your assistant. No, they cannot just be assigned to help everyone else or to lead a small group. No, you cannot just provide another worksheet. No, you cannot just give them some*	Above average students can take things a step further by looking at the how this relates to perfect cubes.

extra questions. Find fun, engaging strategies and resources for <u>all</u> of your children. Find an interesting book, educational website, extra fun activity, etc.)	
Facilitating a classroom environment that supports student learning	The classroom has been set up in such a way that students can all see and hear. Students have assigned seats. The host teacher has several ways of refocusing the class if they get off topic or if they become too loud which I will use if needed.
Extension	Students who finish work early may work on other math homework, IXL, or IA as needed.

WHAT IFS

Be proactive. Consider what might not go as planned with the lesson. What will you do about it?

What if students…	What if students are difficult to manage? I know several ways to bring the class back under control as has been modelled by the host teacher.
What if students cannot…	What if students cannot grasp the concepts being taught? I will attempt to explain it in a different way.

REFERENCES

Cite all sources used in the development of this lesson, including URLs or other references

Better Lesson. (n.d.). *Perfect Squares Tile Activity*. Retrieved from Better Lesson: https://betterlesson.com/lesson/resource/1987846/perfect-squares-tile-activity-pdf

Eto, J. (2013, November 12). *Perfect Squares*. Retrieved from SMART Exchange: http://exchange.smarttech.com/details.html?id=d40c0f9c-c664-49aa-973f-fc5892039808

Lesson Plan Checklist

Checklist: For every section that you understand and agree with, type in your initials. Then, sign your name at the very end.	
Initials of Student to Indicate Agreement	Important Checklist Information
IDQ	I understand that the host teacher will evaluate the quality of my lesson planning in the LiveText Field Experience Assessment (FEA) section. I will email this lesson plan and ALL materials to the host teacher at least one week in advance.
IDQ	I will still submit this lesson plan and ALL materials into the Blackboard submission link at least one week in advance. I will include all copies or pictures of all handouts, materials, study guides, worksheets, PPTs, Smartboard presentations, etc. along with the Lesson Plan submission into Blackboard. I understand that I cannot make excuses for this, because Blackboard will accept multiple attachments for this assignment. I will not request a resubmission in Blackboard. If I fail to submit to Blackboard at least one week before the lesson date, I will accept the Blackboard late penalty even if I emailed anything to my teacher.
IDQ	I checked the Instructional section of the lesson. It has step-by-step instructions and detailed descriptions of what the teacher must say and do (eg. *not* "We will read the PowerPoint"). A substitute can follow the lesson plan easily.
IDQ	The CPC objective sentence is correct. It matches with the standards, my instruction and the evaluation. I understand that I must get the alignment right. The entire lesson must "match."
IDQ	The PowerPoint presentation, visual, or other presentations are saved on a USB flash drive and in an email account. If I have a Smartboard presentation, I created it in the Smartboard program. I have a back-up plan if the technology does not work, so I will not fumble or waste any time.
IDQ	For the school day lesson plan, I will ask the host teacher to take my picture, so that the host teacher can make sure that the children are not in the picture. However, the host teacher/supervisor has the right to decline. Therefore, I will ask about my picture at least one week in advance. *Note: You are NOT authorized to photograph and/or record any of the children without written parental permission forms, in ANY of your placements.*
IDQ	All of my materials are ready for the lesson. If I have manipulatives for my lesson, they are gathered and organized in baggies, baskets, etc. for easy distribution and no wasting of class time.
IDQ	I will use non-food items for manipulatives and activities. This is an essential food safety consideration. Some schools do not allow teachers to bring in food. Some of the students may have food allergies. I will keep students safe as part of lesson planning. Also, candy may have a negative impact on student behavior.
IDQ	I will arrive early to physically prepare the room for the lesson *(eg. put up posters, pass out all forms, etc.).* **I will set up my own equipment quickly.** I will practice beforehand in the SOE technology lab with my own computers. I will have all of the required adaptors and items. If I am using the Smartboard, I will create the presentation within the Smartboard program.

IDQ	I read the professional dress information in the Teacher Education Handbook (find this on the U-Guide). I will wear professional clothing that is very modest. I will dress for a "job interview." As one example, my stomach will not show if I raise my arms. My clothing will not be tight. I will be covered up. No "parents" can complain about my outfits. I will wear very professional dress clothes. If I do not have any, I will buy some.
IDQ	I will come up with a system for calling on all students. I will not wait for student volunteers for questions.
IDQ	I will not "turn my back" to the students at any time. Therefore, I will plan to teach in ways that allows me to face the students at all times.
IDQ	I will not use any negative words while teaching. I will not use the words tricky, difficult, hard, etc. I will present all information in a positive way and provide encouragement to students who are struggling. I understand that some children may internalize negative words about the academic subject and then give up.

Type your full name below.

I, Isaiah David Quigley read the checklist carefully.

This is the end of the lesson plan template.