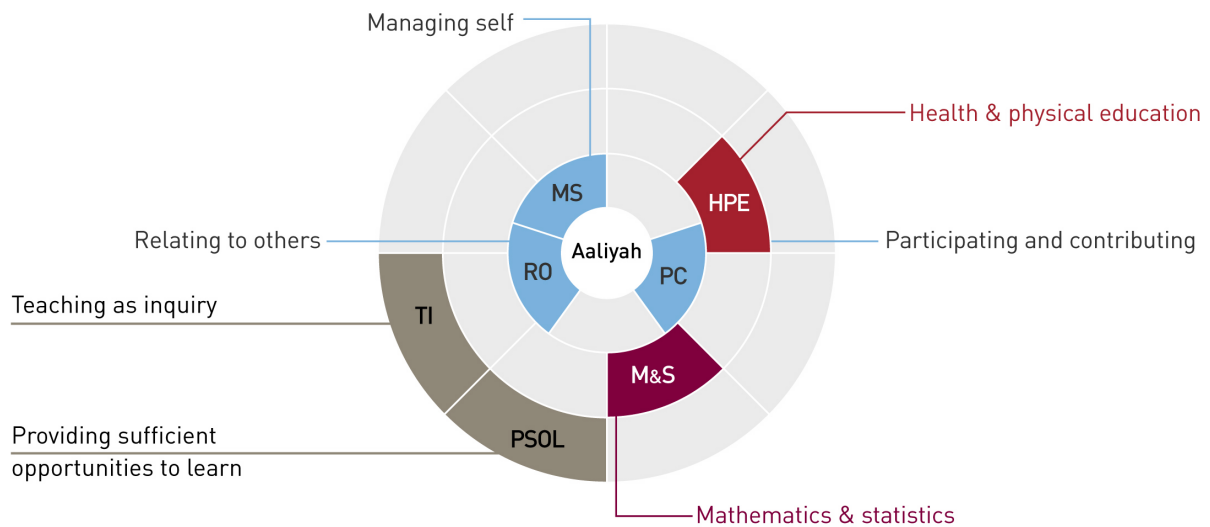


Aaliyah's learning through mathematics

Links to the curriculum



Student background

Name	Aaliyah
Age	6
Year	1
School	Primary

It was discovered recently that Aaliyah has fantastic rhythm and loves to dance. As a result, she has been attending music therapy for the last six months.

Aaliyah has global developmental delay. We have been working out ways to help Aaliyah learn how to be with others in a classroom environment.

The skills we have been focusing on include waiting, taking turns, and recognising personal space. This has been further supported by the supplementary learning support (SLS) teacher, who works with Aaliyah three times a week for three quarters of an hour per session.

Three learning stories

- 1. Finding a circle** 15 May 2008
- 2. Making a dinosaur** 16 May 2008
- 3. Mixing with my friends** 6 June 2008

This string of learning stories shows Aaliyah joining in various class activities, as well as being able to initiate some participation herself, which results from an interest in mathematics.

Finding a circle

Student	Aaliyah	Date	15 May 2008
		Observer	Julie (teacher)



For the last two weeks we have been talking about shapes in the context of our geometry unit.

Today, Aaliyah was in a small group that went to look for shapes out in the playground. She quietly and independently went on her search and then called out enthusiastically "I have found a shape!" She was able to identify the shape she had found as a circle and to tell her peers that it had one side.

The next day Aaliyah was very keen to write about her shape at writing time. She sought the help of the student teacher, who helped her to write about the circle she had found.

Analysis – what learning is happening here?

Aaliyah showed me that she is able to work outside in a constructive and positive way. This is amazing growth for Aaliyah, as working outside has often resulted in her running away from the group. Now that she has demonstrated this ability, I will be more able to use opportunities to use the playground as a teaching resource.

Key competencies

Managing self

Aaliyah showed that she was interested in what we have been learning about in the classroom.

She displayed the ability to follow instructions and work outside the classroom, quietly and independently.

Participating and contributing

Aaliyah took part and discovered a shape in her environment. She was able to tell her friends about the shape she had found.

Learning areas

Level 1 health and physical education: Healthy Communities and Environments: rights responsibilities and laws, people and the environment

- Take individual and collective action to contribute to environments that can be enjoyed by all.

Level 1 mathematics and statistics: Geometry and Measurement: shape

- Sort objects by their appearance.

Where to next?

We will:

- encourage Aaliyah to explore the school environment with a pre-determined focus for that exploration; for example, I will ask her if she can recognise circles in the staffroom
- introduce more shape words that she can learn to recognise
- encourage Aaliyah to use shapes to make pictures.

Making a dinosaur

Student	Aaliyah	Date	16 May 2008
		Observer	Julie (teacher)

Continuing on our learning journey about shapes as part of our geometry unit, we have started to use shapes to make pictures.

Today, Aaliyah was able to work independently to make her picture using shapes. The shapes were pre-cut and the children had to choose which ones they needed to make their picture.

Aaliyah followed instructions, waited for her turn to choose some shapes, and then worked quietly alongside her peers at her desk composing her picture. What fantastic skills.

She used the glue and crayons carefully and was able to complete her picture of a dinosaur.



Analysis – what learning is happening here?

Aaliyah is showing that she can manage herself and relate to others in the classroom. She waited her turn to share and select the shapes she wanted.

Her interest in this activity is something I need to explore. Her usual short attention span and frustration with given activities did not happen. She was able to wait, share, and to persevere until the activity was complete. This may be due to an interest in mathematical ideas.

Key competencies

Managing self, Relating to others

Aaliyah followed instructions and demonstrated her ability to share with others. She was able to wait her turn and then choose the shapes she wanted, without disturbing other students' learning.

She independently chose her shapes and also decided what picture she was going to make.

Learning areas

Level 1 health and physical education: Relationships with Others

— Explore and share ideas about relationships with other people.

Level 1 mathematics and statistics: Geometry and Measurement: shape

— Sort objects by their appearance.

Where to next?

We will:

- expose Aaliyah to more turn taking and sharing opportunities
- explore Aaliyah's fascination with mathematical things.

Mixing with my friends

Student	Aaliyah	Date	6 June 2008
		Observer	Julie (teacher)

Today, I noticed that Aaliyah is continuing to develop positive interpersonal relationships with the other children in the class. She has started joining in with what they are doing in a positive way that contributes to everyone's learning. She calmly collects what she needs and is able to ask if she can join in with their activities. They are starting to respect her as a friend and include her.

Awesome!



Aaliyah asked if she could sit next to Jennifer and take part in the activity before school started. Here she is practising the shape of 'u' with Jennifer.



Aaliyah is looking at a browsing book while sitting with her classmates on the mat rather than sitting on her own in a separate part of the classroom.

Analysis – what learning is happening here?

Aaliyah has grown so much. She is able to sit at a desk with other children without interrupting them. I will keep a desk with activities that she is able to do independently in a quiet area for her to go to when her frustrations are not under control. It will be important to ensure that she continues to develop the social skills we are focusing on in the classroom and with the SLS teacher in order to form good relationships; for example, learning to be a group member. Picking suitable buddies for classroom activities will help support her participation in the classroom.

Key competencies

Managing self

Aaliyah wants to be accepted by the other children. Previously, she had usually been socially excluded by the other children. As she has started to show that she can manage herself in relation to the interests of the group, she has become more part of the class. The other children like her and encourage her to control some of her frustrations.

Relating to others

Aaliyah wants to be a friend and has shown she can relate to others in more positive ways.

Participating and contributing

Aaliyah wants to do what her classmates are doing and to share appropriately.

Learning areas

Level 1 health and physical education: Relationships with Others

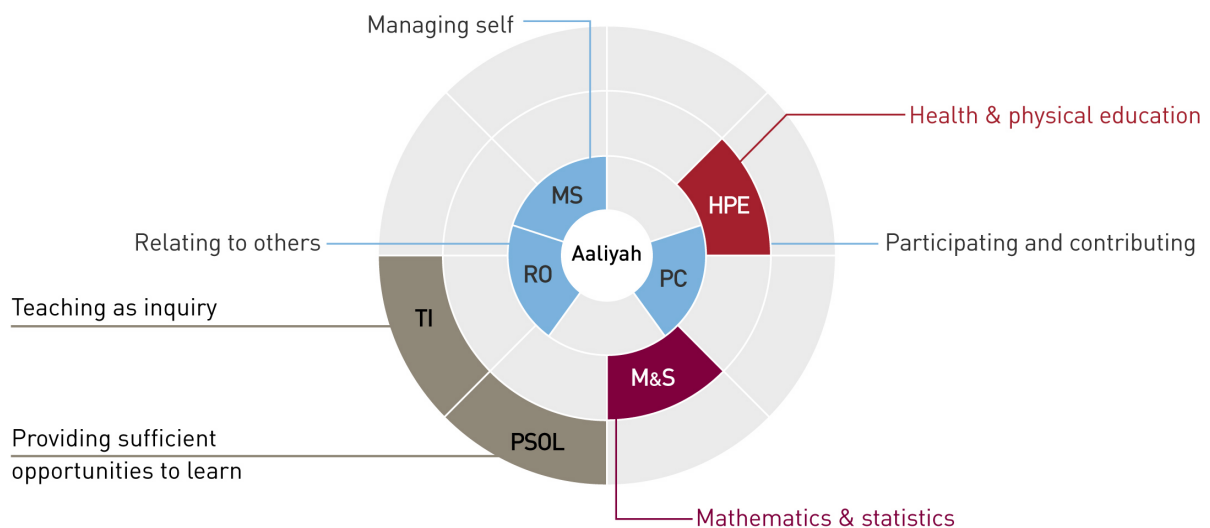
- Express their own ideas, needs, wants, and feelings clearly and listen to those of other people.

Where to next?

We will:

- provide appropriate supports as Aaliyah participates in class and syndicate activities
- help Aaliyah identify how a friend acts and communicates.

Reflection – what these stories exemplify



Key competencies

Aaliyah's apparent interest in shapes may have been one of the factors that has helped her to join in class activities with greater focus and consideration of others (managing self and relating to others). This has rubbed off into other areas where Aaliyah is now seeking to participate.

How might these stories strengthen Aaliyah's identify as a learner?

Aaliyah is showing signs that she wants to be an active and valued class member. It is encouraging that, in the third learning story, she initiated her participation in activities with classmates (agency).

Aaliyah's learning is taking place inside the classroom, outside the classroom, before school, and in the learning areas of mathematics and language (breadth).

Aaliyah showed she could work in a variety of situations (class, group, pair, and individual) and with different materials from within her environment (playground equipment, writing about her chosen geometric shape, shapes in art, printing practice, and reading browsing box) (depth).

For more information on the four dimensions of agency, breadth, continuity, and depth (ABCDs), refer to *Narrative assessment: a guide for teachers*.

Learning areas

Level 1 health and physical education

Level 1 mathematics and statistics

Aaliyah's learning is mainly situated in the relationships with other people strand of health education, where she demonstrated respect towards others while expressing her own wants through words and actions. This came through in the context of mathematics in the first and second learning stories (and English in the third learning story).

Effective pedagogy

The teacher, supported by the SLS teacher, continues to provide Aaliyah with modelling and opportunities to join in appropriately with her classmates (providing sufficient opportunities to learn). By pursuing Aaliyah's apparent interest in mathematics when planning and focusing her further learning, coupled with the growing acceptance of Aaliyah by her peers, the teaching enabled additional learning to take place (teaching as inquiry). This string of learning stories is an example of how learning in health education and the key competencies, which were a focus for Aaliyah, can be nurtured by other learning areas such as mathematics.

Reflective questions for the reader

"Do we seek to be surprised by our students?"

"How do we give our students space to reveal their interests?"

"How do we give our students time to take risks with their learning?"

Useful resources

Janney, R., & Snell, M. E. (c2006). *Social relationships and peer support* [Part of the set *Teachers' guides to inclusive practices*] (2nd ed.). Baltimore, Md.: Paul H. Brookes Pub. Co.

Wright, R. J., Martland, J., A.K.Stafford, & Stanger, G. (2002). *Teaching number: advancing children's skills and strategies*. London ; Thousand Oaks, Calif.: P. Chapman Pub.