

## Science and literacy in the sandpit

By Hannah Richardson  
BBC News education reporter

**Instead of starting formal learning at the age of five, a review of primary education says children should continue with play-based learning. What does this mean in practice?**

A group of five-year-olds poke around in the sandpit for buried treasure in the form of coins.

They are not just getting grubby - they are rehearsing their literacy and numeracy skills and their natural powers of imagination.

This is just the sort of play-based learning that engages the four, five and six-year-olds at Northfield Infants School in East Yorkshire.

Headteacher Lynn Wilson explains how a teacher might encourage children to work with her on creating story.

### Fidgeting

"If we were doing a fantasy story about pirates, say. Then in the sand there would be coins as buried treasure and the children aged five and six would be encouraged to look for it afterwards.

"For those in Year 2, they would do something similar but they would basically be expected to record what they had found and count how much treasure they collected."

In this way, the children build on what they have learned in their specific literacy and numeracy classes.

"It really works because several children may choose to go to the sandpit at the same time and they have to negotiate with each other," says Mrs Wilson.

**" Children are born learning - they're naturally curious "**  
Dame Gillian Pugh Cambridge Primary Review

This means the children might be learning but they are not aware they are being taught.

The school, which is open plan, is divided into themed areas such as literacy, numeracy and role-play and each area has supporting equipment and cards on the wall.

The numeracy areas, for example, feature number cards and various activities, such as counting tables, which the children can choose and interact with.

As in a nursery, children move freely from one area to another, but their self-started learning is helped along by a trained adult.

"For children who are aged four to seven we do need adult supervision so we make use of teaching assistants. We couldn't do it without them," says Mrs Wilson.

As the children get older, although they still have an element of choice about which activity they choose, the amount of direction they get increases.

The amount of time they spend sitting at tables doing group working also increases.

By the time they reach the end of Key Stage 2, the hope is they are more able to sit at a desk and receive instructions from a teacher in the traditional way.

### Science of sand

Mrs Wilson added: "Four to five years ago, that's how all children were taught here, but then we made a conscious decision to take part in a project to encourage a play-based curriculum.

"Being taught to sit down all day on a chair just has a negative effect - that's why we have changed it.

"And we have always had above average results since we changed our approach."

She continued: "In Europe, children don't start school until they're are six or seven. I wouldn't say that starting school later is the answer - it's about the provision within the school that needs to make the best of the children."

Dame Gillian Pugh, co-author of the primary review and member of the government's Early Years Advisory Group, said it was easy to mis-understand the nature of play-based learning.

"We are not saying they should never do any numeracy and literacy until they reach the age of six," she said.

"What we are talking about is a less formally-structured curriculum than where children sit quietly doing exactly what the teacher says.

"Instead, let's get back to their enthusiasm and excitement and push that along a bit."

"Children are born learning - they're naturally curious.

"The way that we engage with young children is that we provide them with the opportunity to begin to read and begin scientific learning - we might call it playing with sand and water - but scientific learning is what it is."

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