

# Maths Research Project

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Question:

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- How do adult's support children's mathematical enquiry?

# Rationale

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- School improvement plan focus
- Class data
- Staff confidence
- Adult child interactions

# Ethics and Methodology

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- Consent forms
- Questionnaires for staff
- Video and non participant observations
- Training

# Research

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- Findings from data collected
  - The role of the adult
  - Planning
  - Questioning
  - Vocabulary
  - Training

# Continuous provision planning example

Area	AO1	Planned Enhancements	Key Questions and Resources	Observations
Outside	CoEL – Engagement, Motivation and Thinking Physical Development 22-36: Can kick a large ball. 30-50: Can catch a large ball. 40-60: Shows increasing control over an object in pushing, patting, throwing, catching or kicking it. Maths 22-36: Uses some language of quantities, such as 'more' and 'a lot'. 30-50: Uses some number names accurately in play. Shows an interest in representing numbers. 40-60: Recognises numerals 1 to 5. Records, using marks that they can interpret and explain.	<b>Interests:</b> catching, kicking and throwing <b>What:</b> Balls and beanbags. <b>Why:</b> <b>Skill:</b> To develop kicking, throwing and catching skills. Independent: Opportunity to develop catching and throwing skills. Adult: Support children to develop catching, kicking and throwing Model number graphics to represent how many kicks, catches etc. Key words: Throw, catch, high, low, under, over, number words	Questions: How far did you throw your beanbag? Can you throw to your friend ...? Resources: Balls Beanbags Buckets Hoops Numbers clipboards and pens chalk	
Maths area	CoEL – Engagement, Motivation and Thinking Maths 22-36: Uses some language of quantities, such as 'more' and 'a lot'. 30-50: Identifies how many objects are in a set. 40-50: Counts up to three or four objects by saying one number name for each item. Communication and language: 22-36: Uses language as a powerful means of widening contacts, sharing feelings, experiences and thoughts 30-50: Uses talk to connect ideas, explain what is happening and anticipate what might happen next. 40-60: Uses talk to organise, sequence and clarify thinking, ideas, feelings and events.	<b>Interests:</b> insects and animals <b>What:</b> insects and animals to sort and categorise <b>Why:</b> <b>Skill:</b> To categorise and count objects. Independent: To explore different ways of making sets and finding how many in each. Adult: Support children to categorise and count objects 1:1 Key words: more, lost, most, least, less, number, object and colour names	Questions How will you sort the objects? How many ... do you have? Which has the most/ least? Resources Small insects/ animals Sorting hoops or bowls Numbers Clipboards and pens Pictures of insects/ animals	
Role play	CoEL – Engagement, Motivation and Thinking Literacy: 22-36: Repeats words or phrases from familiar stories. 30-50: Joins in with repeated refrains and anticipates key events and phrases in rhymes and stories 40-60: Uses vocabulary and forms of speech that are increasingly influenced by their experiences of books. PSED 22-36: Interested in others' play and starting to join in. Seeks out others to share experiences. 30-50: Can play in a group, extending and elaborating play ideas, e.g. building up a role-play activity with other children. 40-60: Takes steps to resolve conflicts with other children, e.g. finding a compromise	<b>Interests:</b> Pirates/ journeys <b>What:</b> Pirate and journey enhancements <b>Why:</b> <b>Skill:</b> To work in collaboration with others Independent: Opportunity to explore role play. Adult: Talk to children about their ideas. Support conflict resolutions and story lines. Be in the play with children role modelling good language and restating children's ideas.	Questions: Can you tell me the story? What is happening? Who are you? What do you need to ...? Why are you? Resources: Pirate and Journey provocations	

# Reflection

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- Impact on maths provision
- Impact on other curriculum areas
- What next?